ELECTRIC REFRIGERATION NEWS

The business newspaper of the electric refrigeration industry

VOL. 2, NO. 4, SERIAL NO. 28 | DETROIT, MICHIGAN, OCTOBER 26, 1927 | Entered as second class matter August 1, 1927, at the Post Office, Detroit, Michigan. | PRICE TEN CENTS

FOOD PROTECTION TO BE STUDIED BY U. S. GOVERNMENT

Long Delayed Research Program to be Carried Through

The Society for Electrical Development, 420 Lexington Avenue, New York City, has issued a progress report on electric refrigeration, in which it is announced that the plan to have special research work undertaken by the Bureau of Home Economics of the U. S. Department of Agriculture has finally been arranged. This research work, which was aimed to determine fundamental facts about electric refrigeration, by original research on the part of an authoritative government organization, was part of the co-operative market development program for which six manufacturers subscribed a fund of $100,000 to be administered by the Society in carrying out a well defined educational program during 1926. According to the report, it was found that the governmental department could not receive funds for special work from a national association, and this difficulty was overcome by arranging to have the contract executed with the Department of Agriculture by the Electric League of Washington, D. C. The work is being financed out of the fund originally subscribed by the manufacturers, but owing to the delays incident to the execution of the necessary contracts, it was decided to postpone the actual start of the work until September 1.

The only question now is whether or not the manufacturers will supply the equipment requested by Dr. Louise Stanley, head of the Bureau of Home Economics. The Department of Agriculture has received funds for two months' work and additional moneys will be placed at its disposal through the Electric League of Washington, in accordance with the contract. This work will go on uninterruptedly and it is considered advisable that it shall continue for a period of not less than twelve months.

The reports of the findings of the Bureau of Home Economics will be made

(Continued on Page 9, Column 3)

FRIGIDAIRE ADVERTISEMENT REVEALS ECONOMIES OF ELECTRIC REFRIGERATION

The question of the actual saving made through the use of electric refrigeration, which arises with the sale of practically every machine is well met in a three-quarter page Frigidaire advertisement which appeared in the Detroit News, October 13.

The advertisement is headed "Frigidaire saves average of $105.36 a year over ice refrigeration." The following copy explains how this figure was arrived at:

"Many still regard electric refrigeration as expensive. To prove that this is not true of Frigidaire, we sought the opinion of some 10,000 users.

"The answers were startling. They indicated savings even greater than we anticipated. According to carefully tabulated records, an average of $105.36 per year—over and above all operating costs! These amazing economies are due to two things: (1) No ice bills. (2) No food waste. But remember—there are other economies that cannot be figured in dollars and cents. Cleanliness, for example. Convenience. Health protection. Ice freezing and dessert making service. Frigidaire gives them all to you. Who can now doubt that Frigidaire saves money far beyond the cost?"

BRILLIANT COLORS FEATURED IN 1928 KELVINATOR LINE

The idea of making the electric refrigerator a "thing of beauty" in apartments, duplexes and small homes by various color finish combinations and designs belongs to Kelvinator Corporation, Detroit, which has just announced a new line of special finish refrigerators.

For the modern kitchen which is each day becoming a more attractive room, we find the following color combinations listed: Chinese red base with black border and a parrot on door, torquoise blue base with border on door of conventional orange and lemon design, apple green base with fine border on door of darker green, and jersey cream base wtih fine border on door of dark green.

Formed condenser coils

No Scale. Smooth inside. Formed and fabricated to your order. Write for Prices

1431 Central Ave., Detroit, Mich.

WOLVERINE

SEAMLESS COPPER AND BRASS TUBING

Electrical Treasure Ship Features Refrigeration and Radio in Phoenix

Electric refrigeration and radio ride the wave of prosperity together on this Electrical Treasure Ship, sailing under the colors of the Electrical Equipment Co., Phoenix, Arizona.

Apparently the radio-refrigeration combination is proving a happy one if we are to judge from the expressions on the faces of "Captain Kidd" and his attractive crew drafted from the ranks of the company.

Every care was exercised to see that the Treasure Ship was a true replica of the type of vessel used by pirates in sailing the seven seas.

The float caused much favorable comment among the people of Phoenix.

Radio and Electric Refrigeration Are Winning Team Mates for the Dealer

Refrigerator Sales Offset Summer Slump in Radio—Both Require Specialty Salesmen —Service Problems Similar—Old Customers Become New Prospects

RADIO-REFRIGERATION COMBINATION KEEPS THE SALES CURVE UP

Two Lines Makes Prospect List Double in Value

By A. Horne

The securing of satisfactory dealer representation is one of the outstanding problems in the successful distribution of electric refrigeration. From many angles it would appear that the radio dealer is the logical outlet for such distribution. So thinks Mr. Dahl, San Francisco dealer for Copeland refrigerators and Bosch radios.

"The radio dealer is essentially a specialty man. Unlike almost any other kind of a dealer, he has trained himself, and has also trained his assistants, to SELL. He doesn't wait for people to come and take his goods away from him. He knows what factors enter into the sale of a specialty article. The same knowledge, the same habit of mind, can be brought to bear on the sale of electric refrigeration. And because in the public mind refrigeration is mostly a summer necessity (a mistaken idea, because 'every day is summer time in the kitchen'), the sale of refrigerators is destined to remain, for some time at least, a summer affair, while radios find their greatest sale in the winter—the peak of one line of merchandise in this way conveniently overlapping the valley of the other, and vice verse.

"For this reason alone," Mr. Dahl continued, "radio dealers take kindly, even eagerly, to the idea of taking on a refrigerator line. They know from experience what their radio business amounts to in

(Continued on Page 7, Column 1)

Combination Works in Kansas City and New Orleans

W. L. Putnam, of the Western Radio Company of Kansas City, Mo., says:

"This year we have built an organization of nearly 100 dealers. It is true that in many cases the same service man handles both radio and electric refrigeration. Our thought, however, in taking on electric refrigeration was not necessarily to give the service man a job in the summer—instead, it made a medium to hold both our sales force and the dealer's.

"It is my opinion that it would be hard to find two lines that would make a year 'round business that would work together better than electric refrigeration and radio. I believe the consumer market for both lines is just about the same—neither is there much difference in the dealer outlets, with the exception, perhaps, of music stores."

Henry R. Goldstein, of the Gulf Sales, Inc., 1123 St. Charles Ave., New Orleans, La., says:

"Radio sales are almost nil during the summer months. Consequently electric refrigeration has filled this gap in our business. We have separate service departments for each line.

"Prospects for electric refrigeration are also prospects for radio, and in many instances we have both installed in the same homes.

"We believe that the two make excellent team mates, because the peak of one falls during the summer months and the peak of the other comes during the winter season."

An Outstanding Sales Feature for REFRIGERATORS

WIRFS PATENTED

"AIRTITE" CUSHION GASKET

RADIO DEALER SAYS PUSH REFRIGERATION 8 MONTHS IN YEAR

$3,000 Capital Needed to Handle Refrigeration Line

By Willis Parker

As far as the radio dealer is concerned, electric refrigeration fits perfectly into the merchandising picture of the radio dealer, according to Mr. F. W. Gray, president and manager of Gray Brothers Radio Company, Denver, Colo. He qualifies his statement, however, by the big, little word "if" and tacks on to it, "if the radio dealer will take electric refrigeration seriously and construct his sales organization, his display and merchandising stock, his service department in a manner that shows he means business."

The two lines of merchandise are in many ways similar. They are similar in price (if we consider good radio sets); are similar in the manner of sales methods, in servicing, in the capital required for best merchandising and service efforts; the same list of prospects suffices (when we consider the residence sales) and in both lines; the sale of one instrument leads to the sale of another. Pride of possession enters into the purchasing motives in either case. Time financing is a detail in either picture.

Instead of endeavoring to compete with the automobile for summer attention and to force business in radio when the public is more interested in good roads and mountain trips, this company considers radio a four months' business, and turns sales energies into more profitable channels by push-

(Continued on Page 4, Column 1)

IMPROVEMENTS IN ELECTRIC MOTOR DESIGN EXPLAINED

Engineers of Motor Manufacturers Speak at A. S. R. E. Meeting

The characteristics of an ideal motor for electric refrigeration service were outlined and the technical methods of accomplishing the requirements in terms of small motor design were explained in a most interesting manner at the fall meeting of the Detroit Section of the American Society of Refrigerating Engineers, held at the club rooms of the Detroit Engineering Society Monday evening, October 17.

D. H. Garcelon, of the Westinghouse Electric & Mfg. Co., Springfield, Mass., opened the discussion by showing, in diagramatic form, the operating characteristics of the two principal types of fractional horsepower motors, "split" phase, used in connection with household electric refrigerators, namely, the "squirrel cage induction" and the "wound rotor repulsion induction" types. Wayne J. Morrill, General Electric Co., Fort Wayne, Indiana, supplemented the outline previously presented by showing variations in these basic designs which improve their operating characteristics. A. D. McLay, of the Detroit Edison Co., explained the viewpoint of the central station with reference to power factor and starting current.

H. L. Brump, of the Day-Fan Electric Co., Dayton, Ohio, next contributed to the discussion by showing the possibilities of the split-phase type of motor, with a centrifugal clutch which reduces the starting current. Paul Baker, Wagner Electric Co., St. Louis, Mo., added to the education of the assembly on this important subject by further discussion of design problems. W. H. Eldridge, Holtzer-Cabot Electric Co., Boston, Mass., made further comment. J. W. Naul, Diehl Mfg. Co., Plainfield, N. J., was present, but explained that his company is not manufacturing motors for electric refrigeration duty. E. C. Robinson, Century Electric Co., St. Louis, Mo., reviewed the history of fractional horsepower development from the early days, and showed some of the difficulties encountered by the manufacturers in meeting the requirements for this application.

Another feature of the program was a discussion of the methods and purposes of the Underwriters Laboratories, Chicago, presented by Sydney B. James, engineer in charge of the casualty and automotive department. Mr. James stressed the point that the Laboratories are organized as a non-profit operation, in which the companies submitting equipment for test pay the actual expense involved. He made it clear that the Laboratories make no adverse comment on any equipment in case it fails to meet their requirements and that their function is limited to the approval of materials and equipment from a casualty and fire-hazard standpoint.

Specifications of an Ideal Electric Refrigerator Motor

In discussing the numerous requirements which face the manufacturer of electric motors, Mr. Garcelon outlined the characteristics of a motor which would be ideal under all circumstances. He pointed out that the ideal motor must have a high "starting torque" and a high "pull-up torque" to get under speed against the heavy load of the electric refrigerator compressor. These characteristics are essential to this application of electric power. Furthermore, the manufacturer is insistent upon reliability since the machine must operate automatically under adverse conditions and without attention over long periods of time. In brief, no motor is good unless it stands up and delivers service under home conditions.

In addition to these demands, the central station is insistent upon high "power factor" because this affects the capital investment in generating equipment neces-

(Continued on Page 8, Column 1)

Electro-Kold Makes Two Appointments

Electro-Kold Corporation, of Spokane, Wash., has appointed J. C. Allen, electrical contractor, 1665 34th St., San Diego, Calif., dealer for San Diego county.

Frederick W. Salt will be the new factory representative for Electro-Kold for northern California. He assumed his new duties October 15 and his headquarters is now, care of E. A. Cornely Co., Inc., 1452 Bush St., San Francisco, Calif.

Leading manufacturers trim their refrigerators with

INCO Monel metal

The International Nickel Co. (Inc.), 67 Wall St., New York City

ICE MAKERS OUTLINE ADVERTISING PLANS TO MEET COMPETITION

Increased Budget Covers Extensive Campaign in Colors

That the icemakers of this country realize the necessity of some action on their part which will meet the great volume of advertising being done by manufacturers of electric refrigeration, is evidenced by the tentative plans laid down at the meeting of the Committee on National Educational Publicity of the National Association of Ice Industries at Chicago on September 23.

According to a statement by the committee, while the advertising of the past year has accomplished a lot of good in spite of the meager space employed, the volume of it has been out of proportion to the advertising done by the small refrigerating machine people. It has also been out of proportion to the size and the revenues of the ice industry. Other industries, such as the florists, laundry owners, and confectioners, were cited as having successfully used campaigns after which the icemakers might pattern their own.

"Some of these industries," the report of the committee stated, "enjoyed much smaller revenue and did a much smaller annual business than is true of the ice industry, and still they spend more freely for the protection and improvement of their business." The report continues: "The $300,000 recommended by the committee for next year is a very moderate sum. The competing forces are thoroughly awake and lavish in their effort; the ice men cannot afford to let the public get a one-sided education. Time is a big factor.

Electric Refrigeration To Give Ice Real Battle

"To be sure, the small ice machine has had no walk-away as yet; it is struggling to overcome the reaction which always follows in the wake of popular interest in a new thing; the novelty wears off, and then it must be sold on a utility basis, and *will be* sold by a widespread sales effort, backed by voluminous advertising. The machine itself will be made as fool-proof as possible, service will be organized, and electric energy rates be made low. As the machine people move forward into their 1928 campaign, you can depend upon its being a sweeping advance and giving ice a real battle. On an even basis of effort, ice can easily hold its own. But will the effort be anywhere near equal? Will the ice industry advertise in anything like the volume and color of the small machine industry?

"There are a number of things for the ice industry to do, some of which are already being done, but can be done more effectively. They are: The sale of good refrigerators and the ousting of poor ones, more vivid and voluminous national advertising, more widespread news service for ice, more direct contact with ice customers, better service, scored ice and the outside icer.

A study of the cost of ice service in the average household made by the committee will be of interest for comparison with the cost of electric refrigeration.

"The results showed that in the wealthy home ice averages about $75 for year-round service; in upper middle class homes it averages about $43, about $3.50 per month; in the lower middle class, $29.00, or less than $2.50 per month for year-round service." The report of the committee states that advertising copy and layouts for next year have been submitted and generally approved. Much of this copy will appear in colors as full page advertisements to appear in national magazines. Through the use of color the advertisements bring out the appetizing appearance of foods preserved with ice refrigeration. "Build up baby's vitality now—before hot weather" and "It pays to take ice the year-round" are two of the headlines which appear in the tentative series of advertisements. The whole series will be presented at the annual convention of the National Association of Ice Industries to be held at Atlanta, Ga., Nov. 1—4, 1927.

RADIO DEALER FINDS THAT BONUS TO INSTALLATION MAN CUTS SERVICE OVERHEAD

The installation bonus plan being used by a successful radio dealer suggests an adaptation of the idea to the installation of electric refrigeration equipment. This radio dealer has found that his service overhead is reduced 50% by paying his men a commission of 1% of the sale on every installation that does not require servicing during the month following the completed work.

Every successful electric refrigeration dealer realizes the importance of careful installation. Many of the larger companies employ check-up men whose duties are to follow the route of the installation men, checking their work.

It seems that if this plan of paying the installation men a commission will work in radio, the same idea should be just as successful, or even more so, in electric refrigeration. The small commission offered may mean the difference between a perfectly installed machine rendering the service which it should throughout the period of its life, and the hastily installed equipment with trouble recurring at frequent intervals.

Iroquois Offers Set of Six Attractive Window Cards

The Iroquois Electric Refrigeration Company of Philadelphia is supplying its dealers with a set of six attractive cards for use in either window display or in the show room.

The cards are lithographed in several colors and each one features some dainty that may be prepared in the electric refrigerator. The cards are about 8 by 17 inches, a size which appears well when displayed on top of the cabinet. Three of the cards are die cut like the one above, the other three plain.

The electric refrigeration dealer is not play or the show room.
overloaded with window display material as are those in many other lines, so that helps of this kind are appreciated and put to work at once in either the window dis-

Servel Closes Atlanta Office

The Atlanta, Georgia, office of the Servel Corporation has been closed, according to an announcement by the receivers for the corporation.

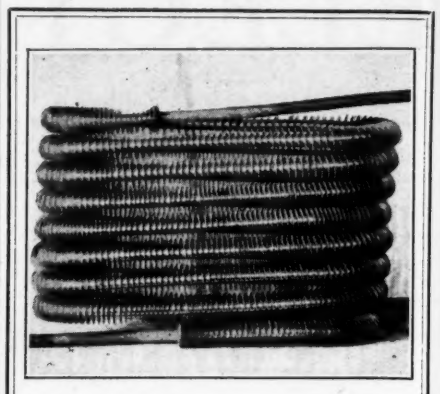
NEW BUILDINGS THAT ARE SPECIFYING ELECTRIC REFRIGERATION EQUIPMENT

The Bristol Construction and Realty Co., Main Street, Bristol, Conn., recently organized, will start work on a 20-apartment building to be known as the Upsonian Apartments. Plans specify a brick and steel building, each apartment with electric refrigeration.

An apartment house at 147 Columbia Road, Dorchester, Mass., will cost $200,000. Philip Markovsky has accepted plans prepared by Saul E. Moffie, architect, to provide for a three-story and basement brick building for 60 apartments, each to have an electric refrigerating unit.

Charles R. Greco, 11 Beacon Street, Boston, Mass., has completed plans and specifications for the proposed new home for the Overseers of the Poor Department of the City of Cambridge, Mass., to be erected on Concord Avenue. The building will be 40 x 480 feet with three stories and a basement. A full line of electric refrigerating equipment is required. The project is estimated to cost $300,000.

Tell the friend who continually borrows your copy of the NEWS to use the coupon on the last page.



ROME CONDENSERS

are formed in any shape of one piece of seamless copper tubing, fitted with heavy gauge copper radiating fin. Rome condensers are five times as efficient as plain tubes

Rome-Turney Radiator Company

ROME, N. Y.

"Hitting Below the Belt"

By DAVID A. BROWN
President General Necessities Corporation

THERE'S a great deal of "hitting below the belt" in the Electric Refrigeration Industry.

Many organizations, through their managers and sales executives, show a lack of good sportsmanship by whispering campaigns aimed at their competitors.

There was a time when a "knock-down and drag-out" method in business was the order of the day. "Get your competitor—get him honestly if you can—but, be sure to get him," were the instructions handed out to the sales force.

That we are past all of this in the old established lines of business is an accepted fact. Yet, in the infant industry of Electric Refrigeration, we have still to learn the lesson of "live and let live."

Gloating with glee at the financial embarrassment of your competitor and using it as a sledge hammer to secure his dealers is just plain "rotten business."

Climbing over the sick bodies of those engaged in a similar line to get an order is not the highest type of salesmanship.

Tearing your competitor's machine to pieces, just to build up a selling argument for your own, makes you eligible to the "Knockers Club" and the odor that arises from their headquarters smells like skunk.

Talking about injunctions and patent suits to scare the dealer and buying public is only the "woof, woof" of the business-bully.

In a field as great as that which faces the Electric Refrigeration Industry, there is no place for business methods which are not of the highest.

Speaking fairly of your competitor's machine, and being sympathetic and helpful during his period of trial, will do more for the industry than the present day dirt-throwing and mud-slinging method.

The day is not far distant when the Electric Refrigeration Industry will be organized, and we shall have to meet each other face-to-face.

Then let us so conduct ourselves and our business that when that day comes we will be able to stand erect, grasp the hand of our competitor and look him square in the eye, rather than be compelled to hang our heads in shame.

IN ALL THE WORLD THERE IS NOTHING
BETTER THAN ABSOPURE REFRIGERATION

Absopure Electric Refrigeration Systems

A Complete Line for

Homes, Duplexes	Delicatessens	Restaurants	Fur Stores, etc.
Apartments	Chain Stores	Candy shops	Water Coolers
Butchers, Grocers	Florists, Hotels	Dairies	Ice Cream Cabinets

Responsible distributors and dealers should write NOW for particulars

Absopure FRIGERATOR

Division of GENERAL NECESSITIES CORPORATION
DAVID A. BROWN, *President*
General Necessities Building DETROIT, MICHIGAN

Winter Months the Best Time to Sell Commercial Equipment

All Year Service Problem Less Serious When Supported by Continued Sales—Combined Commercial and Household Business Gives Desired Spread

By E. B. Mallory, President, Climax Electrical Refrigeration Co., Chicago, Ill.

Apropos of your recent editorial, "Can the dealer make a profit," appearing in the September 28 issue of the ELECTRIC REFRIGERATION NEWS, I feel that the unconscious mental reactions of executives trained over a long period of years in the automotive industry, manufacturing and selling a product in which obsolescence and replacement was anticipated and expected in two years, possibly influenced manufacturing and sales policies adversely in the development of the household refrigeration industry, with doubtless some effect on the conduct of the small commercial machine industry.

The sales and service of small commercial machines had for years been in the hands of dealers organized for this purpose, adequately representing the manufacturer, at a profit to both dealer and manufacturer and rendering proper service to the customers.

With the great impetus given the sale of household types of refrigeration equipment, dealers of all classes rushed into the field to participate in this apparent bonanza aided and abetted by the new and inexperienced manufacturers.

In the small towns and communities, electrical dealers, hardware dealers, furniture dealers, and others undertook the sale and service of household electrical refrigeration machines without substantial foundation or knowledge of the fundamentals or future requirements of such an undertaking.

In the larger centers, firms and corporations were organized to deal exclusively in this new article of merchandise, similarly ignoring the fundamental requirements of such an undertaking and the probability of continued profits.

The central stations, in many instances, rushed into this new development, attracted by the prospect of greatly increased 24-hour loads at lighting service rates, only to find that their public policy necessitated extending their responsibility for adequate service to all makes of machines, to insure continuity of use of the equipment, when the dealers for economical, or for other reasons, failed to continue the necessary service. In view of the great variety of machines in service and the vast differences in theory and practice incorporated in these machines, this proved to be a most expensive undertaking.

The automotive dealer profits to a great extent on the standing in the community he can build up by the quality of his product and the character of his service, his profits being largely proportionate to the repeat sales he can make to his clientele. The refrigeration dealer, handling household refrigeration equipment, is denied the opportunity of profiting by repeat sales, as a good refrigeration equipment is designed and intended to serve twenty years, and under the most adverse conditions could be conservatively considered as useful for at least ten years.

Automobile and Refrigeration Service Problems Compared

The dealer spreads vary materially, but in the main do not represent sufficient compensation for the difference in the cost of service to apparatus repaired on the customer's premises. It has been found from experience that rendering service on the customer's premises represents in traveling time and expense as much and frequently more than the actual cost of repairs. Contrasted with this, the motor car dealer has the advantage of rendering service almost universally at his place of business, at the net cost of the actual repair work.

Contrasted with this situation, we have the dealer in commercial refrigeration sold largely to local merchants, this equipment varying only slightly in size from the household types, although unfortunately heretofore not of a uniform type. This class of dealer has been successful over a period of years and destined to continued success, as the standard of service and excellence in merchant equipment is necessarily being raised year after year to meet local competition.

Commercial Equipment Sold and Installed During Winter Months

The butcher shop, delicatessen store, or ice cream dispensary cannot be disturbed during the hot months of the year to replace ice or inadequate mechanical equipment, obviously providing a short lull in the sales activity of a commercial refrigeration dealer during the late spring and early summer months—just at the time when electrical household refrigeration is of greatest interest to the consumer and most readily sold by the dealer's sales organization.

It is apparent that all forms of refrigeration machinery involve periodic service, as in the case of all types of mechanical equipment, from Swiss watches up to the largest locomotives. It is obvious, however, that a service organization necessarily operating twelve months in the year represents a less serious problem when supported by continued monthly sales, and conversely, customers exhibit greater confidence in a dealer known to have a conservative, consistent business, maintaining adequate service facilities continuously.

It is also axiomatic that a service organization can perform to much greater advantage and more economically on machines of similar type, principle and design, varying as to size only.

Central Stations Will Support Dealer Prepared to Render Service

The central station, scorched in the fires of prevailing practice, will quite obviously give generous support to a dealer set up to sell and service a complete line of machines, as the advantages of standardization of product and service are apparent.

It would be improper to express the foregoing observations without proper recognition of the participation in the development of this industry, required of the hermetically sealed type of unit.

While destined to limited opportunities individually, from seasonal character and other causes, its susceptibility to economical installation and freedom from excessive service, recommend it as a desirable equipment for the small household refrigerator to be sold by the dealers, fitting into his picture as a very valuable element.

Suggests Possible Consolidation

As a manufacturer of a complete line of domestic and commercial refrigeration units, we feel very keenly the responsibilities of manufacturer to the dealer and the requirements which must be met in excellence of product and variety of sizes to insure a profitable undertaking for the dealer. A substantiation of our analysis of the industry and its future requirements has necessitated a material expansion in our manufacturing and sales program, which may result in consolidation with one or more existing manufacturers having adequate manufacturing and selling facilities, but an incomplete line of product, the obvious advantages of which are apparent.

The unfortunate position of some manufacturers at the moment is not disturbing, as similar reconstruction periods have occurred in the development of other industries, varying in degree with the relative growth of the various industries, it being our feeling that the refrigeration industry will find a safe, sane and level ground, based on sound policies and practices, much sooner than has been experienced in other industries, notably the radio industry, where an even more exaggerated and precipitous growth was evident.

IMPROVED KELVINATOR-NIZER ICE CREAM CABINET SHOWN AT CLEVELAND CONVENTION

Among new equipment on display at the Association of Dairies Industries Convention in Cleveland, October 24-29, is the improved Kelvinator-Nizer ice cream cabinet.

According to the announcement of the Electric Refrigeration Corporation, the improved cabinet has a new motor of the split phase type especially designed for electric refrigeration work. It has no brushes, no commutator or short circuiting device. Interference with radio reception is said to have been entirely eliminated.

A new type condenser is being used which it is claimed dissipates more heat per pound of metal than any other device and by reason of the rapid heat transfer effects economy of operation. The condenser is of the fin-tube type.

The gears on the compressor have treble the former contact service, operate at a reduced speed, and effect an almost frictionless transmission of power, it is claimed.

Kelvinator-Atlanta in Larger Quarters

Kelvinator-Atlanta, Inc., distributors of Kelvinator refrigerators, recently moved into larger quarters at 492 Peachtree street, Atlanta, Georgia. The concern was formerly located at 25 Houston street, but the rapidly increasing business from the territory made larger quarters imperative.

"Business in the Atlanta territory is exceptionally good," states J. J. Palmer, manager of the company. "During the past summer our sales developed so rapidly that to compare them with sales of a year ago does not seem to be a fair comparison. There is no doubt but what electrical refrigeration is here to stay, and is rapidly developing into a 'household necessities' line."

DETROIT KELVINATOR MAN SELLS $9,400 INDIVIDUAL UNITS IN THIRTY DAYS

An outstanding job of prize winning is in the story of the winnings of E. Panush, crack salesman for Dalrymple-Johns Co., Kelvinator distributors, Detroit. According to D. J. Staples, sales manager for the company, Mr. Panush sold a total of $9,400 worth of individual units, exclusive of apartment house installations during the month of September. In all fairness, it must be acknowledged that some inspiration was afforded by the offering of special prizes by both the factory in Detroit and the Dalrymple-Johns Co.

For having made the above mentioned volume of sales in September, Mr. Panush was rewarded by the factory with a buffet Kelvinator. For having sold 37 individual units between August 1 and September 15, Mr. Panush was awarded $100 in cash by the factory and $100 cash by Dalrymple-Johns. For having sold 15 "Sealtite" cabinet Kelvinators after Sept. 10, Mr. Panush was awarded one of these cabinets as a prize from the factory.

The approximate total value of prizes won by Mr. Panush between Aug. 1 and Sept. 30 was $880—a fair month's salary, exclusive of regular commissions.

W. J. Cook was second highest man in the local distributing organization, with total sales at over $5,000, and a reward of a radio receiving set.

Dalrymple-Johns Co. also boasts of seven other salesmen who were prize winners in this same contest, each salesman having sold at least $1,600 worth of individual units during the thirty days' time.

Advertising Agency Appointment

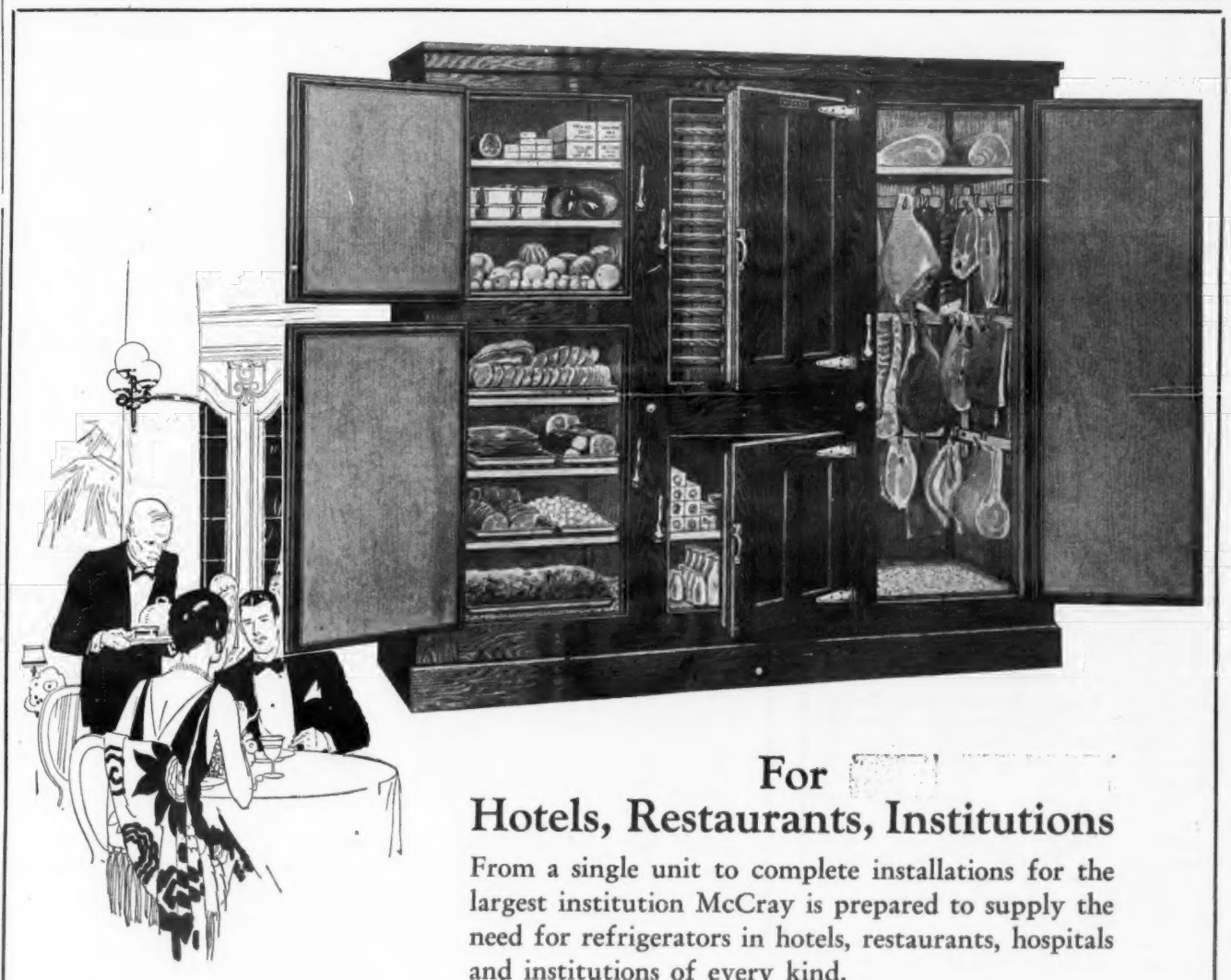
The General Refrigeration Co., Beloit, Wis., manufacturers of automatic refrigerating machines and equipment, announce the appointment of Williams & Cunningham advertising agency to direct their advertising for the coming year.

The BUG BEAR *Eliminated from Electric Refrigeration*

It is no longer necessary to take any precautions against moisture in our SO_2 air-cooled machines. New standards are attained in refrigerating capacity, simplicity and accessibility.

Booths Nos. 253 and 254 in the Arena at the Cleveland Exposition.

Automatic Freezer Syndicate
1716 Ford Bldg. Detroit, Mich.



A Complete Line of Commercial Refrigerators for Mechanical Refrigeration

McCray is the world's largest builder of refrigerators for all purposes. All McCray models are ready for immediate use with mechanical refrigeration of any type. Refrigerators, coolers, refrigerator counters and chests for stores, markets, hotels, restaurants, hospitals, institutions, florist shops and homes—both stock models and built to order.

Pure cork-board insulation, sealed with hydrolene cement, insures efficient, economical and enduring service.

For Hotels, Restaurants, Institutions

From a single unit to complete installations for the largest institution McCray is prepared to supply the need for refrigerators in hotels, restaurants, hospitals and institutions of every kind.

The dealer in electric or mechanical refrigeration of any kind has at his disposal in the McCray line cabinets proved in service for over 37 years.

And the same thorough-going quality marks every McCray product, from a small ice chest to a large cooler, in stock models and built-to-order equipment. The McCray nameplate is recognized as the "sterling" mark on a refrigerator.

Dealers are invited to write for complete information, without obligation.

McCRAY REFRIGERATOR SALES CORPORATION
DEPT. 66, KENDALLVILLE, IND.
Salesrooms in All Principal Cities *See Telephone Directory*

McCRAY REFRIGERATORS
for all purposes

RADIO DEALER SAYS PUSH REFRIGERATION 8 MONTHS IN YEAR

(*Continued from Page 1, Column 4*)

ing electric refrigeration eight months out of the year.

"The radio business begins early in the fall and continues until the first of the year," explains Mr. Gray. "Those who are purchasing radio sets are most likely to purchase them early in the fall, so they can obtain pleasure from their sets from then until the spring and summer static makes reception difficult. Hence the big business in radio is over by January 1st.

Starts Refrigeration Campaign Jan. 1

"January 1st is none too soon to start your plans for summer sales effort in electric refrigerators. It may be a trifle soon to consider the residence installations, but the commercial installations may be considered twelve months out of the year. By January 1st, many merchants have completed their yearly inventories, and, if business has been profitable, are already thinking about improvements for the summer, or else they are in a more receptive mood when the salesman calls upon them.

"From our experience, I'm led to the conclusion that any radio dealer taking on a line of electric refrigerators should have at least $3,000 capital to swing it, for he must carry a full line of parts, a well equipped service department, and a complete line of refrigerators—just one or two will not suffice to give him the volume of business he should enjoy. By a complete line of refrigerators, I mean that the should endeavor to tie up with a manufacturer who produces several sizes of residence units and commercial systems. There is big money in the commercial line, since the installations individually bring larger sums.

"The dealer must have a complete line of parts and a well equipped and manned service department to insure his customers against losses sustained when something goes wrong. There is nothing that hurts the sale of electric refrigerators as quickly as the failure of the units to function for several hours or days because the dealer is not equipped to supply immediate service. This is particularly true with commercial installations—in butcher shops, for example, where spoilage would amount to many dollars.

"Capital is necessary to finance the sales made on the installment plan. Installment selling and buying is so widely adopted that cash sales will be few and far betwen.

Sales and Service of Both Lines By One Force

"A man who is accustomed to selling radio sets talks the same sort of language that a good electric refrigerator salesman talks; hence the same sales force can be used for both lines. The service department, likewise, can handle both lines, but the service men must have some intensive training in the principles of electric refrigeration before they attempt the work.

"The same prospect leads are good for either line, when we consider residence sales, for the price of a good radio set and the price of a good electric refrigerator are practically the same. The radio salesman gains entrance to the prospect's living room; the refrigerator salesman has access to the prospect's kitchen. The family which has purchased a good radio set should be a prospect for an electric refrigerator at a later date, and vice-versa.

Advice to Radio—Refrigeration Dealer

"In reviewing our experience I would advise any radio dealer who selects electric refrigeration for summer sales effort, as follows:

"First—Pick out a good standard line that is absolutely complete—household and commercial—and, if possible, one that is represented by a jobber in the territory which will enable the dealer to work closely with the jobber, and, through the jobber, with the manufacturer.

"Second—Select a good electrical man, who knows radio, but who has the capacity for learning refrigeration (preferably an older man), send him to the jobber's establishment for a few days to learn the principles of refrigeration, how to plan and make installations by actually getting his hands on the machinery; in other words, work a few days with the jobber's mechanical staff.

"Third—Next buy a couple of boxes—self-contained—and go ahead on the household end while learning more about the commercial end.

"Fourth—For this work, select the best available man on your sales staff for the outside sales work. He shall follow up the leads and make a house to house canvass of the community. It would be better, in my estimation, if the outside man had something else to sell besides refrigerators when he makes his house to house canvass. Other kinds of electric appliances would be good, for, if it was impossible for him to sell a refrigerator, he might sell an electric iron, a toaster, or he might sell new tubes for the radio, some batteries, an eliminator—any small sale is better than no sales at all, and he can make his calls more profitable while he is picking up possible leads for the more important piece of merchandise. While the salesman is following the household line, he is getting leads, too, for commercial installations, and, of such installations, he should tackle meat boxes first because they are the easiest.

"Fifth—The dealer should immediately buy a complete line of tools and parts, so that service can be rendered from the start.

"Sixth—Become affiliated with some ice box company, for some prospects will prefer a different type of box or may desire remote installations instead of self-contained units.

"Seventh—Limit the free service period to three months.

"Eighth—On time payments demand a down payment of at least 20 per cent, and the balance in 18 months.

"Limiting the free service period to three months puts your service department on a self-sustaining basis that much sooner. When you have thirty or forty machines sold, your service department can begin to make money on the basis of $1.50 an hour for service.

"A down payment of 20 per cent covers the cost of installation and, if it is necessary to take a machine back because the purchaser failed to make his payments, your loss isn't so heavy, for the depreciation on electric refrigeration is far less than in radio. A radio set depreciates 30 per cent in the first week; a refrigeration unit is as good as new for a long time after it is sold. All you need to do is to clean it up, repaint it and it looks and functions as well as a new machine.

"The electric appliance dealer, who handles radios, and the exclusive radio dealer will find it more profitable to push electric refrigerators during the off season on radio than to endeavor to force radio business when folks are thinking more of summer cottages."

SOUTHERN UTILITIES CO. HAS FINE BUSINESS IN COMMERCIAL INSTALLATIONS

Southern Public Utilities Company, operating in the west part of the Carolinas, is emphasizing commercial refrigeration. Kelvinator equipments have recently been installed in the Rex General Hospital, North Carolina State Penitentiary, North Carolina Country Club and the Merridith College for girls, including in these installations large kitchen boxes, drinking water systems and ice makers.

The Ivy Department Store of Charlotte, N. C., the largest in the Carolinas, has recently been equipped with a Kelvinator-Nizer circulating water system which is giving perfect satisfaction. The management of this store finds that it now costs them but 11½c per day for current to supply cold drinking water for 350 employees and over 2000 transients a day.

Write for prices of condenser coils formed to your specifications.

WOLVERINE TUBE COMPANY
1431 Central Ave., Detroit, Mich.

WOLVERINE
SEAMLESS COPPER AND BRASS TUBING

New Iroquois Dealer Offers 24 Hour Service

The Iroquois Company of San Antonio, handling a complete line of Iroquois electric refrigerators and Bohn cabinets, has recently been organized under the management of Harold W. Todd, formerly general sales manager for the Iroquois Company of Philadelphia.

In the show room at the corner of Nevarro and August streets, a complete line of Iroquois and Bohn refrigerators is displayed.

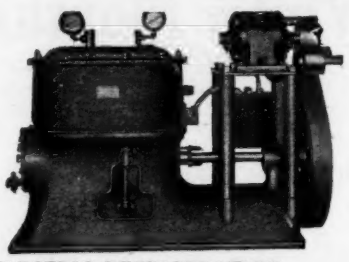
An interesting feature of this new organization is a 24-hour, 7-days-a-week service department.

BUSH CONDENSERS

Made in any size or capacity. Seamless Copper Tubes, Individual Fins, Maximum Efficiency.

BUSH MFG. CO.
Hartford, - - Conn.

WHITE-HANNA
302 Lincoln Bldg.,
DETROIT, - - - - - MICHIGAN



ELECTRIC REFRIGERATION DISTRIBUTORS AND DEALERS

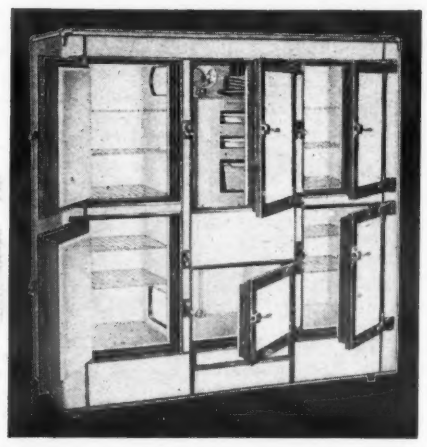
You need the PEERLESS line of commercial units.

PEERLESS units give you a COMPLETE line, ranging from 1 to 10 tons.

Fifteen years of successful manufacturing and merchandising of ice machines are behind the PEERLESS name. Our record warrants your most exacting investigation.

WRITE OR WIRE

PEERLESS ICE MACHINE CO.
503-531 S. Jefferson St.
CHICAGO, ILL.



A Model for Every Need

Kelvinator covers the whole range of refrigeration service. There are cooling tanks and condensing units to fit any standard make of refrigerator---and a variety of cabinets designed to fit and harmonize with any modern kitchen.

The three "Sealtite," steel, self-contained cabinets have brought electric refrigeration to every home. Compact, but with plenty of shelf space, their price has set new standards for such quality.

There are other cabinets, too, larger in size and in a variety of styles and finishes.

And in addition to the Kelvinator self-contained line, all Kelvinator dealers enjoy the Leonard franchise. In each of these refrigerators, backed by 45 years of experience, Kelvinator can be installed.

Through the Refrigeration Discount Corporation on a convenient finance plan of deferred monthly payment, all of this is immediately available.

Kelvinator

Oldest Domestic Electric Refrigeration

Better Always Better

12354 Plymouth Road, Detroit, Michigan

The Major Closes a Tough One

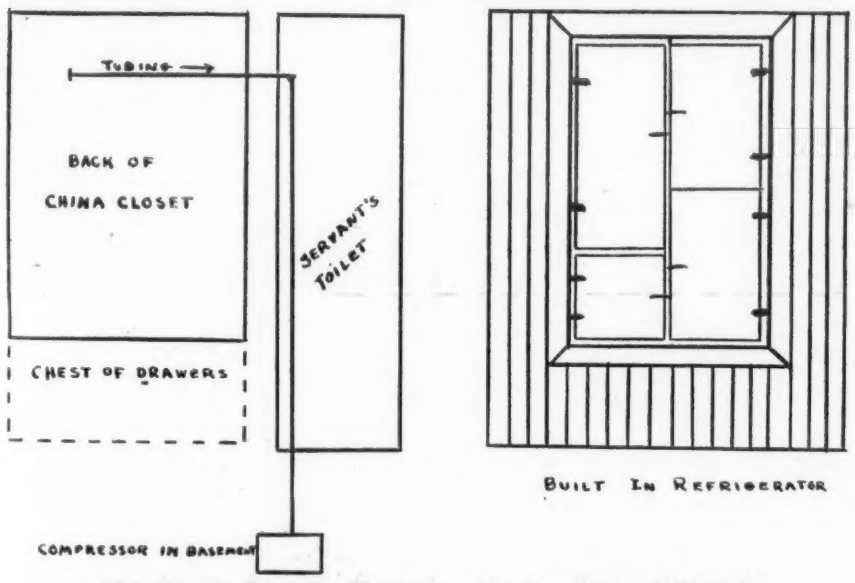
Kelvinator Salesman Wins Order After Hot Argument On Brine Tank, by Devising Ingenious Method of Installing Tubing

Editor's note:—Major Gilbert has served a couple of decades, more or less, in the regular army. The interesting story which he tells here is evidence of his ability as a salesman and his gift as a humorist. He has a host of friends among the readers of Kelvinator's *Cold Facts*, in which publication his first writings appeared. The Major speaks:

Major C. W. Gilbert

"This story has its 'location' in the state made famous by the sacred cod and the festive bean. I was working for a dealer in northern Massachusetts, and was lucky enough to get into the sanctum of one of the executives of a large light and power company. He looked at me as much as to say, 'Who the devil let you in?' I told him who I was and what I wanted to talk to him about. He told me I could talk to him for a few minutes, if he wasn't interrupted, but I would have to talk fast. He told me he was sold on a Frigidaire, knew all he wanted to know about electric refrigeration, and would have had a Frigidaire the year before if they could have installed one where he wanted it. 'What's the main difference between their machine and yours,' was all he wanted to know.

"Well, I dragged out Mr. Brine Tank for an airing. My memory is not good enough to remember all that I told him—I followed his instructions and talked fast. But I thought I would be smart and illustrate my point with some comparison he could get quick. I said, 'Mr. ————, you may liken the direct absorption type of machine to the fellow who works for weekly wages and has no money in the bank. When he stops work he stops paying the bills. When the machine stops work it stops paying its bills, or, paying to the refrigerator the cold that it owes it. The Kelvinator may be likened to the fellow who works for weekly wages, but has a good deposit in the bank. When this fellow stops work he continues to pay his bills from his bank account. When the Kelvinator shuts off it continues to pay the refrigerator the cold that it owes it from the stored up cold in its bank account, or brine tank.'



The Major's Diagram Illustrating His Installation Difficulties

"Then Mr. Executive cuts loose and knocks the world right out from under me. He chirps, 'Yes, but the Frigidaire would cool the box first, because when it began to work it would begin to pay its bills right away, and when yours started to work it would have to put its money in the bank before it could draw any out to pay its bills.' That got my goat. He hit me where I lived, so, knowing he manufactured electricity, I hit him where he lived.

A Direct Hit for the Major

"I said, 'You're perfectly correct, Mr. ————. I may say I have used that remark a number of times, but you are the first who has analyzed it like that. But I want to ask you a question. If we put a kettle of water on a gas range, and another on an electric range, light the gas and turn on the electricity at the same time, which will heat its kettle of water first?' He pulled in his chin about three feet, and said, very soft and low, 'Gas.' 'Sure,' said I, 'because the gas starts heating at once, and the electricity has first got to heat its unit. But which would then do the second kettle quicker?' He brightened up and said in a somewhat stronger voice, 'Electricity.' 'Sure,' I remarked again. 'Now when the two kettles had reached a point about two-thirds ready to boil, and we shut off the gas and the electricity, what happens?' He says, 'The water on the gas range would start to cool off right away, and the water on the electric range would complete its boiling from the stored up heat in the unit.' 'Well, then,' said I, 'which are you interested in, the first cooling of your refrigerator, or the many subsequent ones, and do you believe now that it pays to store up cold?' He laughed and said, 'I thought I had you, but now you have me, and you've got my order too if you can install it where I want it.'

"He got out a blue print of the place where he wanted his refrigerator to go, and spread it out for me to look at. He started to talk. 'Just a minute, Mr. ————,' I interrupted him, 'I want to tell you something. At one time in the Army I had to study military topography. I received a peach of a compliment from my instructor. He told me if I ever committed a crime to draw a map of the place I had gone to hide, and send it back to the people who would be chasing me and they would never find me. And blue prints are in the same class as maps as far as I am concerned. Let me come out to your house and look at your place where you want the refrigerator, and I'll tell you in five minutes whether or not I'll take your order.'

"'All right,' he snapped, 'be out there at 5:30 tonight. Now get out of here—you've taken up all my morning.' (He was going to give me a few minutes if I talked fast.)

"Well, I got out, and, yes, folks, you guessed it, I was at his house at 5:30 and so was he.

The Installation Puzzle

"He showed me what he required. In the dining room was a china closet, flush with the wall, and underneath it a chest of drawers for table linen, also flush with the wall, but extending back a couple of feet deeper than the closet. Through the wall on the other side was the kitchen. Now he wanted to rip out the wall on the kitchen side and set his refrigerator, (a large McCray) on the top of the chest of drawers with the addition of a built out pedestal to give base enough, and that would leave just room enough for the refrigerator to be flush with the wall of the kitchen. It would be back to back with the china closet, and on the kitchen side it would be built in, and flush. Through the partition to the right, facing the refrigerator, was a servant's toilet. BUT, after the refrigerator had been swung into place the devil himself could not have put in the tubing. There was no room anywhere to work. It just simply couldn't be done. He presented me with an 'I told you so look,' and said, 'Give up?' I said my five minutes were not up yet, to have a heart.

"Now, not to break the news too quickly, I am going to make a sketch, although I'm certainly no artist. If I were I'd 'draw' a larger salary.

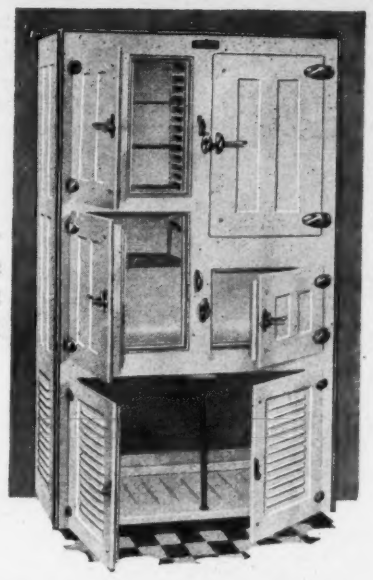
"Then I got an idea. I said, 'I can do it, Mr. ————. I'll place the tank in your refrigerator, measure and bore the hole in the back of your refrigerator for the tubing to come through, then measure across and up and down on the back of the refrigerator for the location of the hole. Then make the same measurements on the back of the china closet and mark the place where the hole in the back of the refrigerator will come against the back of the china closet. Then fasten the tubing and the lead cable to the back of the china closet, go through the partition into the servant's toilet, and down through the floor there into the cellar, where the unit would be placed. Leave about six to eight inches of tubing and lead cable sticking straight out at the marked place on the back of the china closet, and, when the refrigerator is swung into place on the pedestal, the hole in the back of the refrigerator will fit right over the tubing sticking out from the marked point, and all we will have to do is reach inside the ice compartment and hook it to the tank.'

"He looked at me and said a naughty word. 'By ————, that will work,' he said. 'You get the order. Have you a man who can make these measurements correctly?' I said, 'Yes. If I hadn't I'd make them myself.' That ended it. It made, when finished, one of the prettiest installations I have ever seen. Amen."

In writing to advertisers regarding products and propositions presented in this issue, please mention ELECTRIC REFRIGERATION NEWS.

BOHN SYPHON REFRIGERATORS

Beautiful, Distinctive. Can be had in 7, 9 and 12 cubic foot net food storage capacity.



White Porcelain Enamel inside and outside. The machine compartment is ideal for storage space where remote installation is made.

For Electric Refrigeration

Write for Full Particulars

Bohn Refrigerator Company

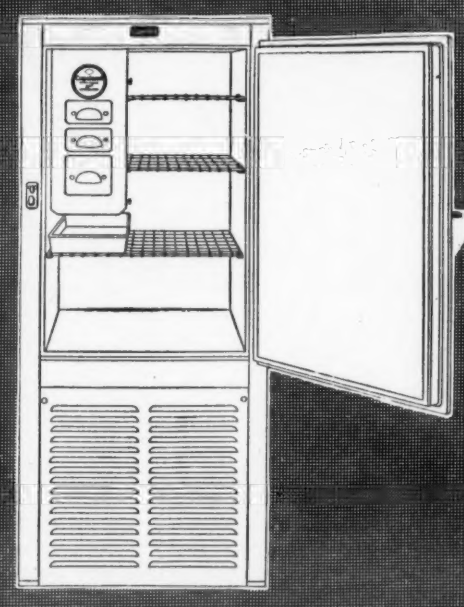
SAINT PAUL, MINNESOTA

These Models are on Display at our own Stores in

NEW YORK 5 E. 46th St. | CHICAGO 227 No. Michigan Blvd. | BOSTON 707-709 Boylston St.

Copeland

DEPENDABLE *Electric* REFRIGERATION



New!

$195

F.O.B. DETROIT

Model N-5, 55½" high, 28⅛" wide, 22¼" deep

A New and Finer Copeland at a New and Lower Price!

A new small Copeland, with Copeland's famous qualities—quietness, economy, dependability! Despite unusually small external dimensions, it has 5 cubic feet of food storage space, 6¾ square feet of shelf area, and makes 108 ice cubes at a single freezing. Shelves are at proper height—no stooping over. Insanitary drain pipe is eliminated. Special features include double-depth drawer and "cold tray". In appearance, construction, capacity, convenience and efficiency this newest Copeland masterpiece has no equal within many dollars of its price.

Copeland has an unusually attractive proposition for distributors who can qualify

COPELAND, 630 LYCASTE AVENUE, DETROIT, MICH.

STAMPINGS

HALE & KILBURN CO.

Your volume requirements in

HOUSEHOLD
ICE CREAM
WATER COOLER
DRINK DISPENSING
MACHINE COMPARTMENT
STEEL CABINETS

1800 Lehigh Ave., Phila., Pa.

STAMPINGS

ELECTRIC REFRIGERATION NEWS

The Business Newspaper of the Electric Refrigeration Industry

PUBLISHED EVERY TWO WEEKS BY

BUSINESS NEWS PUBLISHING CO.

554 Maccabees Building, Woodward Avenue and Putnam Street
Detroit, Michigan. Telephone: Northway 4243-4244

Subscription price: $1.25 per year; two years for $2.00
Foreign Countries: $1.50 per year. Advertising Rates on Request

F. M. COCKRELL, *Editor and Publisher* H. A. DELASHMUTT, *Advertising Manager*
HARRY E. SNEDECOR, *Business Manager* HUGH J. MOORE, *Assistant Editor*
BEULAH WERTZ, *Circulation Manager*

Copyright 1927 by Business News Publishing Co.

OCTOBER 26, 1927

Radio and Refrigeration As Complementary Merchandise

Seasonal peaks and valleys in the sales curve represent a trying problem to the specialty dealer. It is hard to give service and make a profit in a business which alternates between feast and famine. One of the principal difficulties is that of keeping intact a trained organization. The required number of employees when business is active become a burden on the payroll during the slump period.

Many kinds and classes of business are confronted with this problem. Finding a satisfactory answer frequently represents the difference between success and failure. One of the most obvious methods of meeting the situation is the addition of a complementary line of merchandise; namely, a line which supplies what is lacking in the basic commodity. Sometimes it happens that the new item, added merely to fill in the gap to keep men and machinery busy during the dull period, proves to be more profitable than the original specialty.

Radio Dealers See Electric Refrigeration as Desirable Summer Business

The radio dealer has, in most cases, come to accept the summer slump as an inevitable feature of the business. Many such an enterprise has flourished during the winter months, only to perish the following summer because of inability to tide over a period when "all the money is going out and nothing coming in." With experience and observation as a teacher, many radio dealers have cast about to find a line which will fit in their established business. Hence their interest in electric refrigeration.

In the articles on the subject which appear in this issue the various elements of difference, as well as those of similarity, between the two lines are pointed out. There is not a great deal in common between the technical features other than the fact that both are electrical. The radio service man has little to begin with in his study of electric refrigeration other than his ability to understand a complicated mechanism and his acquired ingenuity as a "trouble shooter." He represents good material as a student, however, and in general should have no difficulty in learning the fundamentals of the equipment.

Radio Dealer's Specialty Selling Experience a Valuable Asset

The radio salesman, it is pointed out, is a specialty man. He has contact with the home buyer and has learned how to "explain" a technical product in understandable language. The successful salesman has learned to go after business rather than to wait for business to come in to the store. He knows how to "talk up" the job by arousing the prospect's interest in a more elaborate or expensive outfit than that which he originally intended to buy. Furthermore, his past customers are prospects for his new product.

The radio store is usually well located and has desirable display facilities. A complete showing of electric refrigerators may, in some cases, require more room than is ordinarily available, but the natural tendency will probably be for the radio dealer to limit his activities to self-contained household models, until he has developed sufficient experience to tackle the more complicated commercial installations.

In discussing the possibilities of various merchandising outlets for electric refrigeration, it is not the aim of ELECTRIC REFRIGERATION NEWS to endorse or over-emphasize any particular channel. Our purpose is to bring out, for discussion, the various elements of advantage and disadvantage which appear to be inherent in various trades. Opinions and comments based upon experience are invited for publication in future issues to the end that manufacturers and dealers alike may approach the various possibilities for developing profitable business with the fullest possible understanding of the peculiarities and problems attached to each distribution channel.

In the Next Issue

Commercial refrigeration experience and data. Views of commercial equipment exhibits at Dairy Industries Exposition, October 24-29.

Christmas window and store display suggestions and articles of special interest to central station commercial managers.

FOREIGN SHIPMENTS OF ELECTRIC REFRIGERATORS

August Exports Reported by Bureau of Foreign and Domestic Commerce

Country	Number	Dollars
Austria	12	2,182
Belgium	156	28,002
Denmark & Fr. Is.	19	3,758
France	29	3,769
Italy	159	22,007
Netherlands	18	3,447
Norway	30	4,827
Portugal	4	1,503
Spain	74	12,762
Sweden	34	6,306
Switzerland	92	16,117
United Kingdom	17	3,048
Canada	198	28,005
Costa Rica	4	990
Guatemala	14	2,822
Panama	101	23,132
Salvador	4	720
Mexico	55	12,149
Bermuda	14	1,926
Barbados	1	186
Jamaica	3	540
Cuba	18	5,368
Dominican Rep.	12	3,223
Haitian Republic	4	540
Virgin Is. of U. S.	1	180
Argentina	354	26,480
Brazil	129	23,277
Chile	19	2,343
Colombia	6	2,140
B. Malaya	7	1,734
China	11	1,656
Other D. E. Indies	3	229
Hongkong	6	847
Japan, inc. Chosen	3	731
Philippine Is.	85	19,514
Syria	6	1,019
Australia	511	112,383
N. Zealand	19	4,446
B. E. Africa	1	422
B. S. Africa	85	17,592
Egypt	23	4,577
Liberia	2	362
Peru	7	1,624
Venezuela	17	1,929
Uruguay	34	7,413
B. India	12	2,610
French Indo-China	13	2,638
Total	2,426	421,475

WINTER REFRIGERATOR CAMPAIGN YIELDS 177 SALES IN THREE MONTHS

Cold Weather Campaigning Was Good Publicity

The greater percentage of electric refrigeration dealers are at this time faced with the problem of keeping up the sales curve during the coming winter months. The Danbury and Bethel Gas & Electric Light Company of Danbury, Connecticut, succeeded in selling 177 electric refrigerators, during the months of January, February and March, 1926, according to an interesting article by W. W. McDonald which appeared in the October issue of *Electrical Merchandising*, under the heading, "Cold Weather Campaigning."

The oil cloth covered soap box suspended outside a kitchen window in years gone by is now practically a thing of the past, according to Mr. McDonald. He says that ice box campaigning in zero weather and straw hat selling in Alaska may sound suspiciously like kindred ideas, but that the first has been done. The details of the campaign, which no doubt are applicable in many sections of the country, are given here.

"The Danbury & Bethel Gas and Electric Light Company, with 7,528 meters on its lines in Danbury, Bethel and the little hamlet of Brookfield, Connecticut, has been particularly successful in the sale of electric refrigeration in cold weather.

Whole Force Sells Refrigerators

"In the months of January, February and March, 1926, it started its first drive and with fourteen salesmen at its disposal sold 177 boxes. Nine territory salesmen, two refrigeration salesmen, one house heating engineer and two coke salesmen were pressed into service to sell refrigeration exclusively during the campaign, and as a result the company sold as many electric refrigerators during these three winter months as it did throughout the remainder of the year. Refrigeration sales for the entire year of 1926 totalled $72,000 or 257 units. Ninety-five per cent of these were domestic and 38 sales were turned over to the company by co-operating dealers.

"So successful was the company's campaign in the winter months of 1926 that it campaigned again in February, 1927, though on a smaller scale. Salesmen sold other electrical appliances in addition to refrigeration during this second campaign, and disposed of 28 refrigerators in the single short month. So far this year the company has sold 116 electric refrigerators, 10 of which are commercial installations.

"The Danbury record is conclusive enough proof to anyone that refrigeration can be sold in cold weather. It is convincing enough for R. E. Landers, new business manager of the company, who has already formulated plans for his third consecutive year in campaigning the appliance.

"Here is the story of just how the company planned and executed its first campaign.

"Up to the latter months of 1925 it had sold only a few units. Others straggled in spasmodically and in order to determine just what the merchandising possibilities for the appliance was in the section, Charles H. Taylor, who has been with the company for fourteen years, was selected to investigate by contacting prospects, and to head the refrigeration drive.

"Taylor has resided in Danbury for forty years and he bent every effort to stimulate interest in refrigeration during the latter months of the year, until in November he decided that people were exhibiting enough interest in electric refrigeration to warrant campaigning it. In November, Mr. Landers and Mr. Taylor worked up the following plan for their guidance.

The Campaign Plans

"1. 100 refrigerators were to be available for installation on trial in the homes of prospects for thirty days.

"2. All salesmen of the Danbury and Bethel offices were to be available for refrigerating work alone, and in addition the office force and plant men were to be asked to co-operate by obtaining leads.

"3. A 3 per cent bonus was paid to each salesman obtaining permission to install a unit on trial, this to be supplemented by the regular 7 per cent commission when the sale was completed.

"4. Terms were to be twenty-four months maximum. No trade-ins of any description were to be accepted and a 5 per cent discount was to be allowed to purchasers paying cash within thirty days of installation.

"5. One-third of the total number of machines expected to be moved were to be placed in a Danbury warehouse (33), thus reducing the warehousing cost and still making it possible for the men to carry on until stock could be shipped.

"Danbury immediately went to work laying the foundation for its campaign. All salesmen selling appliances in the territory were advised that they would receive circulars specifically on electric refrigeration when the campaign started.

"A manufacturer's representative came over to town from New Haven and talked to the salesmen at a get-together dinner. Mr. Taylor went into the company's plant, talking about refrigeration and contacted with all the offices employees on the same subject. Meetings were held in the evening for the instruction of the sales force, and on one occasion the New York office sent a chemist to Danbury to address the men on the subject of refrigerants.

Advertising Methods Used

"Advertisements were planned for the local paper each day, lithographed posters bearing pictures of the featured refrigerators were struck off for show windows and posters were gotten in readiness for the cars of salesmen, linemen and delivery vehicles of the company. (All salesmen in the employ of the company are equipped with cars and all of them are required to attend a daily morning meeting at Danbury.)

"Telephone calls were used with great success before the campaign opened and while it was in progress. An office employee called everyone in the local phone book considered a good prospect and invited them to see the new electric refrigerators at the office or to have one installed on trial. No direct attempt was made to sell.

"When the campaign opened the salesmen calling on prospects, some of which they had already contacted in the sale of other appliances, found that in the very novelty of anyone 'selling ice-boxes in winter' helped sales. Mr. Taylor tells us that as planned, campaigning in zero weather 'got the people talking.' He suggested that perhaps the campaign was more successful in the winter months than it would have been if in progress in the summer for this reason.

177 Trial Installations Made

"As we have already mentioned, the machines were installed on trial. One hundred and seventy-seven of them were placed in the homes of prospects—good prospects—on this basis, and but 3 per cent of them came back to the warehouse. The company in all instances placed the boxes in the most convenient position for the housewife and ran a line from the meter box of the building to them, installing convenient outlets for each installation. This method of installing pleased the customers and also prevented any possibility of flickering lights when the thermostat started the motor, due to the sudden load.

"In order to accentuate the success of the trial plan used in connection with the company's first campaign, Mr. Landers told us that the plan has been used successfully on many other appliances and has always been highly profitable. He tells us that it is doubtful if the same impetus could have been given to the initial refrigerator campaign staged in town without this sales feature.

"Salesmen made on the average of fifteen calls per day and were expected to set aside three evenings of each week for refrigeration appointments. The regular morning meeting usually attended in the Danbury office of the company by all salesmen was discontinued for the duration of the campaign and instead they were told to 'stay out until it is necessary to come in.' Ninety-two units were sold in January, the first month of the drive. Mr. Taylor was of tremendous assistance to the men as he had had factory training in refrigeration. In many instances he succeeded in closing sales partially completed by the men, thus stimulating them to greater effort and increasing the sales total.

The Campaign Costs

"The direct expense associated with the sale of each refrigerator estimated before the campaign was as follows: Average selling price $300, average discount 30 per cent, leaving $90 with which to execute necessary expenses.

Regular sales commission	$21.00
Other expenses	13.00
Freight	16.00
Installation	20.00
Advertising	5.10
Bonus to salesmen (3%)	9.00
Miscellaneous	2.00
	$86.10

"However, Mr. Landers tells us that in actual practice advertising ran considerably lower than this estimate. In addition, customers were charged $30 to cover the cost of installation and shipping. Ninety per cent of the refrigerators sold in Danbury are on the time-payment basis.

"During the first campaign all salesmen carried prospect cards which recorded the high-lights of conversation between the salesman and the prospect. In the event that the prospect was not sold, these cards were turned over to the office and filed and followed up later. Thirty per cent of the prospects turned in to the office in 1926 as unsaleable have since been sold refrigerators, many of them in the last winter campaign.

"So that at the end of its second year of winter campaigning Danbury & Bethel is sitting pretty in the refrigeration field. Many of the residents of Danbury, Bethel and Brookfield have been educated and their influence is spreading throughout the section.

"Another campaign during cold weather would certainly net good results, and that is precisely what R. E. Landers and C. H. Taylor are planning. This time it won't be pioneering.

Frigidaire Display Uses Kiddie Appeal

School Days help develop our minds while
FRIGIDAIRE
helps Mother provide the pure wholesome food needed to develop our bodies.
Insist on seeing the name
FRIGIDAIRE
when buying your electric refrigerator

An attractive display featuring Frigidaire was arranged in the windows of the Great Western Power Company, San Francisco, recently, a Frigidaire cabinet model arranged in the background with the door open, revealing the various shelves loaded with food. At the right was a cutout of a little girl holding a piece of chalk in her right hand and standing in front of an immense slate on which there had been written the following: "School days help develop our minds while Frigidaire helps Mother provide the pure wholesome food needed to develop our bodies." Two other large slates were arranged in the window containing the following messages: "Insist on seeing the name Frigidaire when buying your electric refrigerator." "There is only one Electric Refrigerator named Frigidaire. It is a product of General Motors."

The entire display was artistically framed by velour draperies at the sides of the window.

RADIO-REFRIGERATION COMBINATION KEEPS THE SALES CURVE UP

(*Continued from Page 1, Column 2*)

the summer months; they hope therefore that, with the addition of a line that naturally finds its greatest sale during the summer months, they will thus secure a practically year-round distribution of merchandise." Another important consideration is the fact that the average family is not in a position, as a rule, to buy both radio and refrigerator equipment at the same time. While they are buying radio this winter, let us say, the radio dealer (if he also carries refrigeration) is in an excellent position to demonstrate and "talk up" the idea of electric refrigeration for the home, and, by a judicious distribution of circular and other advertising material, keep the idea alive in the prospect's mind till both the season and the pocketbook are ripe for a purchase. Conversely, the family that buys a refrigerator in the summer (if it does not already have a radio) is kept in touch with constantly till it finally is put on the books for a radio set as well. The radio dealer moreover is coming to realize that a summer line of merchandise is essential to his existence, and is finding in refrigeration the answer to his problem.

How Radio and Refrigeration Tie Up

Several other advantages exist in the handling of a refrigerator line side by side with radio. Rent and other overhead charges remain practically the same. Usually no more floor space is required, as, unless the store is in closely cramped quarters, sufficient room can always be found for the display of refrigerator models. The available window space of course is necessarily cut in half. The windows, however, have double the attractiveness for this reason, providing as they do two angles of appeal to the window-shopping public, an attractive and instructive display of refrigerator equipment, pointing out its salient features, often compelling more attention than a radio display itself, on account of the greater novelty of the former.

The Salesman's Viewpoint

Salesmen seem to like the arrangement quite well. The refrigerator and radio sales in this store are handled by different men, but they often find themselves in a position to help each other, by exchanging leads, after having "talked up" refrigeration to the radio customer, or vice versa. Theoretically, of course, as has been mentioned, every radio owner becomes in time a prospect for a refrigerator, if for no other reason than that he has a home, and the means to support it. The dealer, having effected an entree into the prospect's home through one line of merchandise, finds it easier to tackle him on the second line, and his chances of getting him on the books as a customer are therefore twice as good.

Mr. Dahl did not seem to think that electric refrigeration had as yet come to the point where there would be sufficient volume for a dealer to make a specialty of it, to the exclusion of all else, and it therefore practically devolved on some sort of a specialty man in one line or another to take on the distribution of refrigerators. And when it came to a choice of specialty men, Mr. Dahl repeated, he did not see what more logical combination could be hit upon than that of radio and refrigeration, because of the seasonal overlapping.

The Distributor's Viewpoint

The above remarks were largely reiterated by the sales manager of a prominent distributing house, whose electrical refrigeration department has recently been taken over by another concern. Because he, so to speak, has no axe to grind, his remarks in this connection can safely be taken at face value.

This gentleman expressed the opinion that a radio dealer could reasonably expect success in the handling of refrigeration, but that in order to achieve this, his sales and service force would have to be different for each line of merchandise. He did not think that the same salesman selling both radio and refrigeration would be apt to make a success of both; unless, of course, he was exceptionally adaptable.

The Question of "Service"

In the case of the particular line that this sales manager had been handling, the dealer discount was made long enough to enable the dealer to furnish the necessary service after installation. Some companies even insist on the dealer having a service man on his staff before they will grant him a franchise.

Emergency service is provided by the distributor, and every assistance is given the dealer in maintaining an efficient and capable service department. At certain intervals, a school is conducted to which the dealers in the territory send their service men for a short course of instruction, who thus come back fortified with the latest "wrinkles" from the factory and other valuable information. As the problem of making a profit or taking a loss often depends upon the amount of service that a distributor has to furnish, an attempt is made to eliminate at the source the need for service as much as possible. This is done by correct installation in the first place. The distributor in question maintained twenty-two installation men for the service of his dealers and their customers, and by this means he estimates that from 50 to 75% of the service troubles were prevented from developing. In other words, prevention is better than cure, and correct installation is the surest and most dependable preventative known. The service average for the whole country was by this means brought down to as low as about one call per year per machine, a low enough figure it would seem.

In some organizations, the distributor does all the servicing, instead of the dealer doing it. This as a rule is only possible in restricted areas, to which the distributor can have easy access. In such a case, of course, the dealer takes a shorter discount on his merchandise. Often he is given the option of taking the longer or the shorter discount and furnishing (or not furnishing) his own service.

The Sub-Distributor

While the radio-refrigerator dealer combination should work out satisfactorily if the sales and service forces are kept separate, as has been mentioned, the distributor referred to above was of the opinion that the ideal arrangement would be for a sub-distributor to take a certain small territory, comprising a few neighboring towns, and, by spreading the service cost over a greater region, make this department operate at a low average cost while at the same time giving very effective service. In such a case the sub-distributor might even find it profitable to operate a sales organization of his own, keeping refrigerator sets on demonstration at various dealers' stores in the different towns in his territory, and allowing them a small commission on each sale made with their co-operation.

The "Demonstration" Dealer

The Frigidaire organization operates on a somewhat similar basis to the above, except that they handle all business from their own factory branch offices, situated in the key cities. In addition, salesmen and service men are found in practically every town of any size, either making their residence there or working out of some centrally located town within easy reach of every point of the territory they are assigned to cover. Demonstrator sets are carried by the leading "live-wire" dealers in each town, who, however, do no selling, merely passing on the name and address of the prospect interested to the salesman in the territory, who in each case attends to all the business from then on.

Getting the Business

As to the question of getting prospects for refrigerator business, the method is practically the same as that involved in securing new radio business. Next to judicious advertising and attractive floor and window displays, and the direct inquiries that are created as a result of such efforts, it has been found that for steady, consistent results, house-to-house canvassing is the most satisfactory method yet evolved, except where new buildings are concerned, in which case the leads must be secured from real estate agents, architects, building trade papers, and other agencies who would be in a position to know what new building work was being done. But for homes already built, canvassing is the only sure method, for the law of averages must in the long run work out in the salesman's favor. Telling what refrigeration will do in the home to a certain number of prospects each day will result in a certain percentage of live prospects, and again a certain percentage of these prospects will be turned into customers. The contacts thus made in the daytime are followed up by circular information mailed as often as necessary (unless the prospect is in a closing mood), the greater part of the business being actually closed in the evening, when both husband and wife can be found at home together, delays and call-backs being thus avoided. Persistent efforts in this direction have yielded a very consistent volume of business. The radio dealer who puts in a line of refrigeration this winter is going to build up a list of live prospects who will furnish him the much-needed turnover of business when his radio sales begin, towards the summer, to drop off.

RECEIVER ADDRESSES LETTER TO CREDITORS OF BELDING-HALL CORP.

Assets Far In Excess of Liabilities

In connection with the announcement of the receivership for Belding-Hall Electrice Corp., mention of which was made in the October 12 issue of this paper, the following letter signed by Brinton F. Hall, receiver, and addressed to the creditors of the corporation, will be of interest:

"Adverse conditions in trade creating an unusually large inventory for this season of the year, and slow collections, brought about a shortage of cash so that the corporation was unable to promptly meet its current liabilities, with the result that certain impatient creditors commenced proceedings tying up the bank accounts and embarrassing the corporation in the daily transaction of its business.

"At a meeting of a large majority of the creditors it was decided that it would be in the interest of the stockholders and creditors alike that a receiver be appointed to carry on the business for a time, and I have been appointed by the United States District Court for the Western District of Michigan as such Receiver and have taken over the affairs of the company, and shall continue the business.

"The corporation's assets are far in excess of its liabilities, if they can be realized upon in the usual course of business. With my experience and close acquaintance with the affairs of the Belding-Hall Company for the past thirty-five years and upwards, I earnestly believe that I shall be able within a reasonable time to liquidate the debts and place the corporation back on its feet with its liabilities adjusted satisfactorily to all concerned. In the meantime, I trust that you will give me your co-operation."

Wilder Metal Sheets

The Exceptional Product

FOR

BRINE TANKS
REFRIGERATOR LININGS
ICE CREAM CABINETS

Used extensively by the representative electric refrigeration manufacturers. Samples furnished on request.

WILDER METAL CO.
NILES, OHIO

SPECIFY ANSUL SULPHUR DIOXIDE

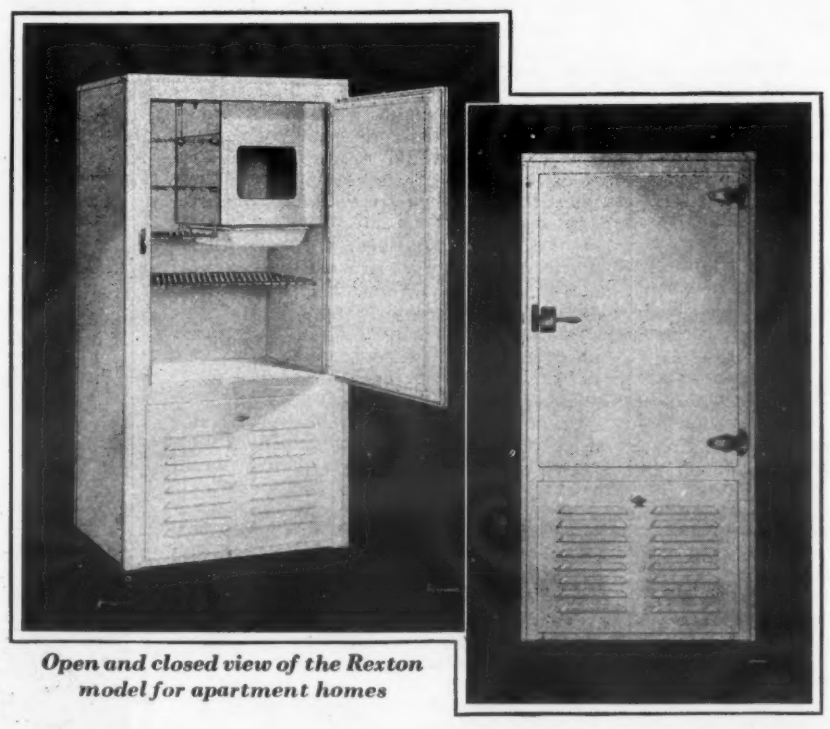
The Product with a Factor of Safety

ANHYDROUS SULPHUR DIOXIDE
ANALYZED

Absolute Protection for Refrigeration

ANSUL CHEMICAL COMPANY
MARINETTE, WIS.

NEW REX CABINETS
for Apartment Homes



Open and closed view of the Rexton model for apartment homes

BUILT as only Rex knows how to build for economy, beauty and long life. These new Rex cabinets are especially designed to fill the exacting requirements of apartment home dwellers. All standard refrigerating units can be quickly and easily installed. Cabinets may be had with or without compressor space below. Six sizes to choose from.

Write today for complete particulars of our liberal dealer plan.

Rex
REX MANUFACTURING CO.
CONNERSVILLE, IND. U.S.A.

FINE METAL CABINETS FOR ELECTRICAL REFRIGERATION

THE VERY LATEST MARATHON MOTOR
REPULSION START INDUCTION ALTERNTING CURRENT
¼ HP, 110—220 VOLT, 1725 RPM SINGLE PHASE, 60 CYCLE
Also a complete line of direct current motors

Especially developed for the Electric Refrigeration Industry

Write for interesting proposition

Marathon Electric Mfg. Co.
Wausau, Wis.

IMPROVEMENTS IN ELECTRIC MOTOR DESIGN EXPLAINED

(*Continued from Page 1, Column 5*)

sary to provide service to the customer. It was pointed out in this connection that the central station investment for each electric refrigerator has been estimated at $60 to $70 per machine. The central station sells kilowatts, but must provide generating equipment and transmission lines to deliver kilovolt amperes. Since the power factor represents the ratio between kilovolt amperes and kilowatts, it is extremely desirable that this factor be as near 100% as possible.

The central station also demands low "starting current," owing to the fact that an excessive inrush puts a flicker in the lights and causes dissatisfaction on the part of the lighting customers.

Characteristics Demanded by the Electric Refrigerator User

Over and above the requirements of the electric refrigerator manufacturer and the central station, the motor manufacturer must give consideration to the demands of the user. The electric refrigerator customer wants high *efficiency* in the motor, since this affects his bill for electric service. Recently he has become very insistent upon *quietness* in operation. He also demands a motor which will not interfere with his radio. All of these stipulations taken together give the designing engineer quite a problem to consider.

The motor engineers were unanimous in agreeing that there were no insurmountable difficulties in meeting the specifications presented by all these three viewpoints, if it were unnecessary to reckon with the matter of cost. For example, it was pointed out that any manufacturer can build *one quiet* motor by taking sufficient care, but that it is quite difficult to secure uniformity of production which will insure quietness in each individual motor. Another problem involved in design is that if any one characteristic, such as efficiency, power factor, or starting torque is overemphasized, it adversely affects other desired characteristics. In other words, in securing an advantage in one direction, it is quite likely to bring disadvantages in others.

Mr. Garcelon devoted his attention mainly to the "split phase" and the "repulsion-induction" types of motor. He stated that the "universal" motor, which operates on both alternating and direct current while it would be very advantageous to the electric refrigerator manufacturer and the dealer operating in districts using both currents, is not satisfactory because of its variable speed characteristics. He showed by a diagram that the simple induction motor has no starting torque and that a supplementary winding is necessary in order to give it the initial impulse. This may be accomplished in a variety of methods, but is usually attained by a secondary winding, which is in the circuit only during the starting period. This winding is then cut off, by a centrifugal switch, since it would lower the efficiency if allowed to remain in the circuit continually. This so-called "split-phase" motor has the advantage of being smaller in size and lower in cost than other types. It has a lower starting torque, however, and requires a very high starting current approximately seven times the normal current. The repulsion-induction motor, Mr. Garcelon explained, is more expensive to construct because the rotor is made of wound coils, instead of copper bars, as in the case of the split-phase induction type. Owing to the fact that the windings must be insulated, a larger rotor is required, and this in turn increases the size of the entire motor, thereby adding to the total cost.

Mr. Morrill, of the General Electric Company, referred briefly to a new type of motor, recently developed, known as the "condenser" type. He then explained an interesting development, in which a squirrel cage construction is added to the wire windings of the repulsion-induction motor. This arrangement gives a high power factor in addition to a high starting torque. With reference to the condensor type, Mr. Morrill indicated that these motors provide a high starting torque, a high pull-up torque, without using a commutator. They are exceptionally quiet and may be made 20 per cent smaller without loss of any essential characteristic. The condensor type is also said to be reliable, quiet, and with a very high power factor.

Mr. Brump of the Day-Fan Electric Co. was asked to explain how they succeed in building a split-phase induction motor which eliminates the disadvantages previously pointed out. He explained that the desired high starting torque was obtained by inserting a clutch which enables the motor to get up speed before taking on the load of the compressor. He stated that the starting current of the clutch type motor is slightly higher than the respulsion induction type, but that the power factor in operation is also higher than the repulsion type.

In the discussion it was frequently mentioned that the friction in bearings and other operating parts represents an appreciable load on the motor. Mr. Baker, of the Wagner Electric Co., informed the audience that they had eliminated one element of friction by lifting the brushes from the commutator after the motor gets into operation. On the subject of quietness, Mr. Baker emphasized that this characteristic always adds to the expense of manufacturing. He mentioned that the quiet motor may be attained by widening the air gap, but that this at the same time lowers the power factor.

Mr. Robinson, of the Century Mfg. Co., brought out the problem of lubrication in some detail. He recalled instances in which motors were returned to the factory after the customer had used all kinds of lubricants, ranging from 3-in-1 oil to varnish and molasses. It seems that the householder frequently figures that anything which comes in a square can and which looks like oil should be a good motor lubricant. Tight belts and tight bearings have been a frequent cause of difficulties, but considerable progress has been made during recent years in the construction and in the material used in bearings. There have also been improvements in belts, such as the adoption of the "V" type, which permits the belt to run looser without slipping.

Comparison of Washing Machine and Refrigerator Motors

Several of the speakers referred to the fact that in the early days of electric refrigerator development, existing types of motors were applied and that many difficulties resulted owing to the fact that the motors were not designed for electric refrigerator requirements. For example, motors which had given satisfactory service in operating pumps had been designed with no regard for noise in operation. Motors which gave satisfactory service on washing machines failed to perform because they were designed for intermittent service of only two or three hours per week, whereas when connected with a refrigerator they were forced to operate several hours at a stretch. In the case of a washing machine motor, efficiency is not an important characteristic, because of the short period of operation. In the case of a refrigerator, however, efficiency is highly important, otherwise the customer will complain of his current bill.

Avoiding Radio Interference

It was pointed out that radio interference could be avoided by proper filtering and shielding, but that this necessarily adds to the production cost of the motor. An interesting statement made by one of the speakers was to the effect that the sparking of the brushes is not the cause of radio interference, but that it is due to the fluctuation of the current in an alternating current motor, which feeds back into the wiring system and sets up inductive oscillations in the sensitive receiving mechanism of the radio.

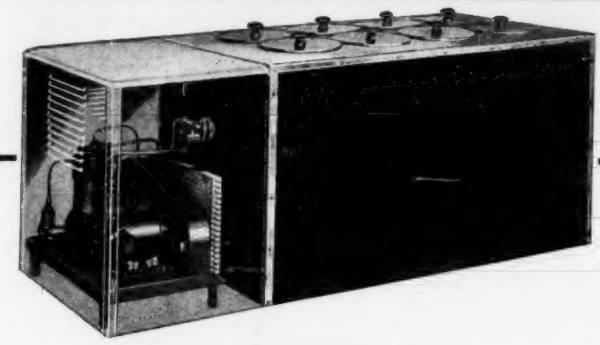
Prof. Hugh E. Keeler, of the University of Michigan, Ann Arbor, Mich., offered the suggestion that the electric refrigerator manufacturers might eliminate one of the problems of the motor manufacturers, namely, that of necessitating a high starting torque, by arranging some device for, such as an automatic by-pass valve or unloader, which would relieve the initial starting pressure of the compressor. In answer to this suggestion, the chairman of the meeting, Glenn Muffly, chief engineer of Copeland Products, Inc., indicated that the manufacturers are naturally anxious to avoid any complication, such as additional valves, which may introduce another factor of uncertainty in the operating of the refrigerating machine.

A. J. Francis, of the General Electric Company, Fort Wayne, Ind., suggested that the motor might be considerably smaller if voltage regulations were maintained in all parts of the country. He stated that since the torque delivered by the motor varies as the square of the voltage, that a 20 per cent drop in voltage, which is frequently encountered in the smaller towns, causes the reduction of 36 per cent in the torque. Owing to this variation in voltage, the motor must be larger than would otherwise be required, hence it operates at less than full load, and this in turn reduces the power factor.

Among those who were in attendance at the meeting were the following:

Patterson Farmer, Universal Cooler Corp.
A. D. McLay, The Detroit Edison Co.
R. M. Davenport, Copeland Products, Inc.
H. S. Fetler, Copeland Product, Inc.
B. P. Watkins, Copeland Products, Inc.
H. L. Brump, Day-Fan Electric Co.
O. G. Lonskey, Copeland Products, Inc.
Wm. Higham, General Necessities Corp.
V. W. Crone, General Necessities Corp.
M. Lassen, Detroit.
F. B. Riley, Standard Refrigerating Appliances.
L. S. Keilholtg, Frigidaire Corp.
I. H. Reindel, Detroit.
V. W. Spencer, Electric Refrigeration Corp.
Roger K. Braun, Electric Refrigeration Corp.
A. E. Wahl, General Electric Co.
E. C. Robinson, General Electric Co.
Wayne J. Morrill, General Electric Co.
J. M. McNulty, General Electric Co.
A. J. Francis, General Electric Co.
D. G. Ellis, Electric Refrigeration Corp.
W. A. Kuenzli, Electric Refrigeration Corp.
J. Josaitis, Electric Refrigeration Corp.
C. C. Bupp, Electric Refrigeration Corp.
H. I. Phillips, Detroit.
C. H. Fessenden, Ann Arbor, Mich.
Hugh E. Keeler, Ann Arbor, Mich.
George T. Sutphin, Electric Refrigeration Corp.
Wm. C. Hill, Universal Cooler Corp.
Henri A. Erysellbout, Copeland Products, Inc.
R. M. Hyde, McCord Radiator and Mfg. Co.
Robert June, Detroit.
R. C. Doremus, George B. Bright Co.
J. N. Yarnell, American Radiator Co.
Wm. F. Eberlein.
Burt C. White, National Ice Co.
C. F. Belshaw, George B. Bright Co.
L. A. Philipp, Ann Arbor, Mich.
H. G. Chamberlin, Detroit.
C. B. Leeson, Electric Refrigeration Corp.
A. Hafke, Electric Refrigeration Corp.
W. H. Eldridge, Holtzer-Cabot Elect. Co., Boston.
Carleton J. Lauer, Electric Refrigeration Corp.
J. M. Naul, Diehl Mfg. Co.
G. H. Gorcelon, Westinghouse Electric & Mfg. Co., Springfield, Mass.
S. V. James, Underwriters Laboratories, Chicago.
F. M. Cockrell, ELECTRIC REFRIGERATION NEWS.
Glenn Muffly, Copeland Products, Inc.

C. C. Spreen, chief engineer of the Electric Refrigeration Corporation and president of the Detroit Section of the A. S. R. E., was unable to attend the meeting. L. S. Keilholtz, chief engineer of the Frigidaire Corporation, Dayton, Ohio, and vice-president of the Detroit Section, was in attendance. Glenn Muffly, chief engineer of Copeland Products, Inc., was chairman of the committee which arranged this interesting educational program. A. D. McLay, Detroit Edison Co., is treasurer, and D. G. Ellis, Electric Refrigeration Corporation, secretary of the Detroit Section. The next meeting will be held about the middle of December, at which time officers for the coming year will be elected.



See Booth 207
at the
DAIRY PRODUCTS EXPOSITION
Cleveland - October 24-29
If You Are Interested in Mechanically Refrigerated Ice Cream Cabinets

We have successfully installed our units in chain stores, soda fountains, meat counters, and other commercial applications.

Refrigeration by Wire

You will be interested in the many improvements we have made in our 1928 ice cream cabinets.

UNIVERSAL COOLER CORPORATION
Detroit, Michigan :: Windsor, Ontario

SHAFT SEALS
THERMOSTATS—FLOATS
HIGH PRESSURE CUT-OUTS
LIGHT STAMPINGS
Automatic Controls for Refrigeration and Oil Burners
GOODNOW & BLAKE MFG. CO.
3840 BEAVER STREET DETROIT, MICH.

MODEL 1419
CABINET BY
Seeger
SAINT PAUL
A fast selling, highly profitable line of fine Cabinets that are built to contain any Standard Electrical Unit.
SEEGER REFRIGERATOR COMPANY
SAINT PAUL, MINNESOTA

FLINTLOCK CONDENSERS
Efficient — Economical — Compact
Give Greater Efficiency at Less Cost
Write for our Booklet
FLINTLOCK CORPORATION
4461 W. Jefferson Ave. DETROIT, MICH.

VALUABLE FIGURES FROM STUDY OF WATER COOLING SYSTEM GIVEN

Big Difficulty is Overcoming Friction in Pipes

With the constantly increasing popularity of electric refrigerated water cooling systems, figures derived from the experience of others with this type of equipment become of considrable value. In an article by George R. Bailey, research engineer, which appeared in the October issue of *Ice and Refrigeration,* information is given which, although it was derived from water cooling systems using ice as a refrigerant, should be of value to those who are installing systems using electric refrigeration.

Mr. Bailey states that the first consideration attendant upon any installation is the load. This load is just as definite in every respect as a heating system load. The only divergence in the analogy between a refrigerating and a heating problem lies in the fact that for the latter there is a tremendous amount of information, data and general practice by which to be guided, whereas for the former, not all authorities agree upon the practice to be followed. The load on any ice water system is produced by three major items. These items are: consumption, absorption and friction.

Consumption will depend as a figure on the population of the building to be serviced and the atmospheric heat. The more people, the greater amount of water which will be consumed and the higher the atmospheric heat, the more each person will consume.

Consumption Figures Vary

Different buildings show a variance in their consumption figures due to the difference in the nature of work carried on there. In buildings where physical work is performed, the consumption figures are high, amounting in steel mills, machine shops and telephone exchanges where manual boards are in use, to one-third gallon per employee per hour. Occasionally a unit figure will be high because of indirect causes. One system studied which showed a consumption of one-third gallon per hour per employee, where this figure did not seem to be justified, was found to be supplying the above amount not in consumption, but as waste.

Mr. Bailey gives the example of a five-story Chicago building where 300 girls of the telephone operator class were employed. A check made during the month of July showed that the peak load came between 9 and 10 in the morning and 2:30 to 3:30 in the afternoon. At these times the five fountains were running 64 gallons per hour per fountain.

55 Degree Temperature About Right

The results of a check in another building as to what the temperature of the water should be were interesting. As an experiment, the cooler was cut in and out of a large system to determine the maximum temperature the employees would stand before complaining. This point was reached with the water just above 60 degrees. With the temperature of 65 degrees the protests swarmed in merrily. An average temperature of 55 degrees appeared to satisfy all but the most exacting and the difference and cost between maintaining the water at 55 and 45 is very considerable.

The remaining two items where refrigeration losses occur are absorption and friction. The former is due to imperfect insulation and the latter to flow through pipes, tanks, valves, pumps, etc.

Further experiment brought out that the fact that the loss of refrigerant due to heat absorption through the pipe and tank insulation was 8 per cent of the total loss, which indicates that this material when properly applied is very efficient and worth a great many times this cost. To further increase insulation would raise the investment disproportionate to any saving that could be accomplished.

With the consumption and absorption element noted, the big consideration, friction, remains. For the information of those who now operate systems, if your lines are well insulated the big loss is due to friction. To overcome this, reduce your gallons per minute to as low a figure as the consumption load will permit. This reduces the velocity and friction will reduce directly as the square of the velocity. A temperature of 55 degrees should be cold enough, but if complaints are made it might be reduced to 50 degrees. It is not necessary to have the temperature below this last figure, besides physicians recommend against it.

Points to Watch on Installations

In concluding the article the following salient points are noted:

"1. If the building is a large one, four stories or more, install mechanical refrigeration.

"2. Do not install several refrigerating units in parallel, but have one unit of sufficient capacity to allow for not more than 75 per cent continuous operation.

"3. Get by with one supply riser and return if possible. Your friction and absorption losses will increase a little more than directly with the length of line installed.

"4. Figure the load of the system, compute the friction and absorption losses and acquire the cost of different sizes of pipe. It is then possible to compute the economical pipe size.

"5. When installing the pipe work, use as few joints or unions, coupling, nipples, tees, elbows, valves, etc., as possible and have the pipe well reamed wherever cut.

"6. Provide the type of fountain which will be difficult to prop open and thus waste the water.

"7. Install the best insulation on all lines, and where this comes in segments, have these staggered, wired and banded."

KEROTEST
FORGED BRASS VALVES
for Mechanical Refrigeration
Quality Shut-off and Cylinder valves in any standard designs or to your specifications.
KEROTEST MANUFACTURING CO.
2525 LIBERTY AVENUE
PITTSBURGH, PENNA.

BAKER ICE MACHINE CO. ESTABLISHES NEW BRANCH FACTORY AT INDIANAPOLIS

Announcement of the establishment in Indianapolis of a branch factory of the Baker Ice Machinery Co., a $1,500,000 concern of Omaha, Neb., in the former Schwartz Electric Co. plant, was made on October 17 by the Industrial Commission of the Indianapolis Chamber of Commerce.

The Baker Company, with a world-wide distribution of commercial refrigerating machinery, expects to manufacture $2,000,000 worth of products a year in its new Indianapolis branch. This company manufactures refrigerating machinery for commercial purposes ranging in size from units small enough for grocery and butcher shop use to machines capable of producing 100 tons of ice a day.

The Indianapolis branch will manufacture three smalelr types of refrigerating machines for butcher shops, groceries, florists, and smaller size establishments.

GENERAL ELECTRIC CO. HOLDS FALL FESTIVAL FOR SCHENECTADY EMPLOYEES

On October 15 the General Electric Co. held its Grand Fall Festival for the Electric Refrigeration Department employees and their relatives at Schenectady, New York. About 6,000 people attended the festivities, which began at one-thirty with an inspection of the refrigeration department in several of the buildings. The various models of General Electric refrigerators were on display, as well as the disassembled machine, showing the various parts which go to make up each unit.

Following the inspection of the refrigeration department, the program was continued on the General Electric athletic field. Here each guest was presented with a favor. Ice cream, candy and soft drinks were distributed to the guests from an array of multi-colored booths.

Lewis Nielson, as master of ceremonies, introduced the first speaker, T. K. Quinn, general manager of the Electric Refrigeration Department, from headquarters at Cleveland. B. L. Delack, manager of the Schenectady works; Christian Steenstrup, engineer in charge of the refrigerator department, and E. E. Spiker, superintendent of the Schenectady department, each addressed the assembly briefly.

Special attractions on the athletic field included a 3,000 foot parachute jump, trapeze work, tight wire and juggling stunt, acrobatic features and hand balancing feats, as well as a baseball game.

SUGGESTS DELIVERY OF INSTALLATION MATERIAL UNDER COVER OF NIGHT

Electric refrigeration dealers on the look-out for new ideas will be interested in this one expressed in a letter from Electric Refrigerating and Appliance Company of Dallas, Texas.

"We thought you might be interested in the following little incident which occurred a few days ago when we sent copper coils and material to a customer's place of business prior to installing a machine.

"The material had not been there more than two hours before the police appeared asking for permission to look over the premises in search of whisky and beer which this customer was supposed to have on his premises.

"It appears that some neighbor saw the copper coils and machinery going into his place, decided that he was making bootleg liquor, and quickly sent in a call to the police for investigation.

"It is suggested to the refrigerating machinery dealers in view of the above that it might be well to deliver all machinery and material in the dead of night."

E. A. Dawley With Southern Colorado Power Company

E. A. Dawley, former owner of the E. A. Dawley Electric Company, of Fowler, Colorado, has sold his interests in that city and is now with the Southern Colorado Power Company, at Pueblo, Colorado. Mr. Dawley continues in his new connection with the sale of electric refrigeration.

FOOD PROTECTION TO BE STUDIED BY BUREAU OF DEPT. OF AGRICULTURE

(*Continued from Page 1, Column 1*)

available through the co-operative manufacturers and in accordance with all work of this nature conducted by governmental departments it must also be made available for distribution to others desiring to make use of it.

The report of the Society states further that in connection with its S. E. D. monthly advertising service for central stations, the Society has included in each month's issue two illustrated advertisements dealing with refrigeration subjects. By the nature of this service, it was necessary to have this advertising absolutely neutral and its main aim therefore has been to sell the idea. From September, 1926, to August, 1927, inclusive, there have been some 24 advertisements which have been placed in the hands of 134 leading central stations throughout the country, which are subscribers to the service.

Summary of Co-operative Program

In presenting the report of what the Society has done in the promotion of electric refrigeration since the meeting of the committees at Waldenwoods, Michigan, in September, 1926, a resume is given covering the details of the activity as follows:

It will be remembered at Waldenwoods a progress report was made by Mr. Feiker, who gave an accounting of the Society's stewardship of the fund of $100,000, subscribed by

Frigidaire Corporation
Copeland Products, Inc.
Servel Corporation
Kelvinator Corporation
General Electric Company
Nizer Corporation

to carry on a co-operative market developing program.

At the same meeting a program was suggested for 1927, which contemplated an amplification of the 1926 program. The Sales and Advertising Committees endorsed this program, but the Executive Committee decided to withhold this program for the time being.

Since that time the Society has consistently and continuously carried on a curtailed, but intensive activity, the expense of which has been covered by the unexpended portion of the 1926 funds.

Below is a concise statement of what has been done since the Waldenwoods meeting last September:

Constitution and By-Laws: Mr. Neagle, legal counsel for the Society, prepared a draft of a Constitution and By-Laws for the Electric Refrigeration Council, governing the setting up of the Electric Refrigeration Council as a permanent body to work with the Society and to provide and control the funds expended through the Society for co-operative market development work.

At a meeting of the executives held in New York in October, 1926, certain amendments to the original draft were made. These were incorporated by legal counsel and submitted to the Executive Commitee for final approval.

General Publicity: There has been included in the Society's weekly news services, in accordance with the regular schedule, special material designed to sell the idea of electric refrigeration. This material has taken four forms: feature articles, special interviews, recipe stories and small space fillers.

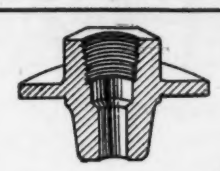
Special Writers: In order that the outside viewpoint might be presented in this special electric refrigeration material, we have from time to time engaged the services of special writers, with the result that a very wide field has been covered. The grade of material offered has been so good that it has been used extensively.

Photographs Supplied: In a number of instances, we have been instrumental in securing photographs on refrigeration subjects that have been supplied to magazines and newspaper syndicates. The co-operation of a number of electric refrigerator manufacturers has been invaluable in enabling us to perform this service.

Assistance to Speakers: Upon request, we have made suggestions for speakers to address industry groups on electric refrigeration matters. The outstanding contribution in this connection was securing the services of Dr. Louise Stanley, head of the Bureau of Home Economics, Department of Agriculture, to address a meeting of some 200 members of the American Society of Refrigerating Engineers on domestic electric refrigeration.

Supplying Statistics: Quite a number of written and telephone calls have been received asking for data and statistics on the electric refrigeration industry. We endeavor at all times to keep up to date our files on the subject, and this has enabled us to render effective service in all cases.

Consumer Booklet: As a phase of educating the public to use electric refrigeration, the Society has continued its endeavors to get wide distribution for the consumer booklet, "The Magic Box." Over 100,000 copies of this booklet have been distributed. It was prepared as part of the 1926 program, and the cost of the booklet was partly underwritten by two of the electric refrigerator manufacturers. The balance of the cost was paid for out of the program funds, being charged to that division appropriated for work of this kind.



Hot Die Pressed Forgings

Valve bodies, tees, elbows, evaporator headers,—anything in the line of brass parts made to your specifications. Rough forgings only. The largest producers of refrigerator forgings in the country.
Send your specifications direct to
ROME MANUFACTURING COMPANY, Rome, N. Y.
Factory Representatives, F. B. Riley and Associates, 320 Beaubien St., Detroit, Mich.

Ice Cream Manufacturers—

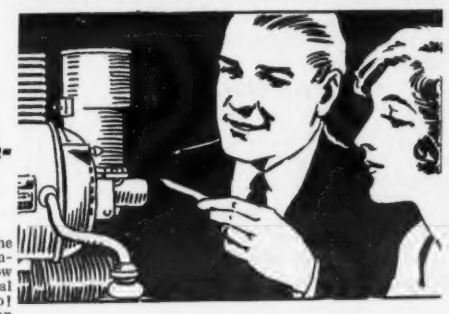
—will be interested to know that the Motors Metal Manufacturing Company are now manufacturing standard ice cream cabinets.

Our Cabinets are being used by the following representative manufacturers: Stroh Products Co., Automatic Freezer Syndicate, Servel Corp., Universal Cooler Corp.

Booth No. 156, Dairy Products Exposition,
Cleveland, October 24-29.

MOTORS METAL MFG. CO. - DETROIT, MICHIGAN

Big Jobs Waiting
for men who know refrigeration expertly, scientifically



Free Book shows you how to connect with the bigger paying, more profitable jobs in the booming refrigeration business. Shows employers how to increase profits—by training their men. Real experts are rare! Trained men are snapped up!

It takes only a few months to make any man a master of the science of refrigeration with our practical home study course—able to tackle bigger jobs of selling, installing and servicing.

Study Refrigeration at Home

The course is easy to understand, written in clear, plain language. Lack of education, age, experience, bars no one. A half hour a day is enough. Forty-eight lessons take you from the beginning to the last word in refrigeration.

Owners, salesmen, mechanics can profit by this course. Gives you full, rich background, knowledge of construction of all types of machines.

Nowhere else can you obtain this type of training that teaches you without the loss of a minute's time from your work. Special offer now open to groups enrolling! Easy monthly payments. Free employment service. Write for the booklet, "Opportunities in Electrical Refrigeration," get the facts.

Utilities Engineering Service
Educational Division
Dept. 410 3120 North Clark St.
CHICAGO, ILL.

for thirty-five years
manufacturers of
Finishing Materials
for the
Refrigeration Industry

Our technical knowledge gained by long years of intimate contact with the refrigeration industry is available to high-grade manufacturers. This is an integral part of our service—really as important to you as the high quality of our product.

BRADLEY - HURTZ COMPANY
Successors Industrial Division Bradley & Vrooman Co.
2626 SO. DEARBORN ST. CHICAGO, ILLINOIS
ENAMELS LACQUERS VARNISHES PAINTS INDUSTRIAL

PIPE *and* TUBE FITTINGS

Made From Brass Rod, Castings or Forgings

For many years we have specialized in the manufacture of brass fittings, in small sizes, for connecting brass and copper tubing.

In addition to fittings made from brass rod and castings, we are now producing similar parts made from BRASS FORGINGS to meet the requirements of Iceless Refrigerator Manufacturers for fittings of a superior type. These fittings will not leak gas, air or liquids under mechanical pressure. They have the compact grain structure, high tensile strength and smooth, flawless surfaces found only in forgings. Our forged fittings are accurately machined, carefully inspected and equal to the most exacting requirements.

Send a sample or blue-print for quotations on parts of a special nature. Catalogue No. R-30, showing our complete line of standard fittings will be mailed on request.

COMMONWEALTH BRASS CORPORATION
DETROIT 5781-5835 COMMONWEALTH AVE. MICH.